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USSR Report

HUMAN RESOURCES

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LABOR

OBKOM FIRST SECRETARY DISCUSSES LABOR INCENTIVES IN UKRAINE

Moscow RABOCHIY KLAS I SOVREMENNYI MIR in Russian No 3, May-Jun 85 pp 3-20

[Article by V. S. Makarenko, member, CPSU Central Committee; first secretary, Crimean Obkom of the Ukrainian Communist Party: "The Course of Intensification and Increased Effectiveness of the Economy"]

[Text] The concept of the systematic improvement of developed socialism--a concept developed by the CPSU and expressed in concentrated form in decisions of the 26th Party Congress and subsequent plenums of the CPSU Central Committee--gives us a strictly scientific picture of our immediate and long-range objectives and the ways of attaining them. As is known, it is the basis of the new Program of the CPSU that will be submitted for discussion at the 27th Party Congress.

Based on a realistic appraisal of our great successes in socialist construction as well as existing shortcomings, this Marxist-Leninist concept orients communists and all working people toward the large-scale, strenuous effort required to resolve key problems in the further development of Soviet society. The reference is to the myriad of complex problems that in their origin and nature relate to one or another stage in the first phase of the communist formation. The reference is to such a strategy of movement toward communism that has nothing in common with slowness of action or with skipping over historically necessary stages.

The improvement of developed socialist society which we have built embraces all aspects and spheres in its activity: economics, social relations, political life, ideological indoctrination work, and culture. Priority is given to the sphere of economic construction which to the party has been and continues to be, in Lenin's words, the "main policy." Based on the analysis of trends in economic and social development, the party's Central Committee concluded that our economic has reached a point where deep qualitative changes in it have become a compelling necessity. Moreover, the attainment of a dramatic breakthrough in increasing the effectiveness of the national economy and in the intensification of all its branches even before the end of the '80's is presented as a task of enormous political significance.

"The intensification policy is dictated by objective conditions, by the entire

course of the nation's development. There is no alternative," it was noted at the All-Union Scientific-Practical Conference on "Improving Developed Socialism and Party Ideological Work in the Light of the Decisions of the June (1983) Plenum of the CPSU Central Committee" on 10 December 1984. "Only an intensive economy developing on the latest scientific-technological foundation can serve as a reliable material base for improving the well-being of the working people, strengthen the country's positions in the international arena, and permit it to enter the new millennium properly as a great and prosperous power." It was stated in this regard that "the intensification of the economy must be given a truly all-people's character, the same political importance as national industrialization had in its time."¹

The party has clearly defined the ways of converting the economy to an intensive footing. The main consideration here is to considerably raise the rate of scientific-technical progress through the concentration of organizational efforts and material means. The technical retooling of branches; the introduction of the latest scientific advances, resource- and labor-saving technologies; and the dissemination of progressive knowhow throughout the entire national economy acquire paramount importance in the present stage. As the April (1985) Plenum of the CPSU Central Committee emphasized, the party demands that primary stress be placed on fundamentally new, truly revolutionary scientific-technical discoveries and decisions capable of raising labor productivity many-fold. "There is need for revolutionary change--for the transition to new technological systems, to the technology of recent generations that offer the highest effectiveness."² The party's decisions are also oriented toward the acceleration of measures to improve the forms and methods of planning scientific-technical progress and its management in all elements of the economy.

The party makes the qualitative transformation of the existing system of productive forces the focal point of its economic strategy and tries to imbue communist and all working people with a very important conclusion: the efficacy of this effort will depend directly on our ability to make the appropriate changes in production relations. The creative search for specific avenues of all-round improvement of the forms and methods of socialist management on the scale of the entire nation and all branches serves as a confirmation of the masses' clear understanding of the politico-economic essence of this conclusion. The entire series of practical decisions by the party's executive organs in recent years have given powerful impetus to the reshaping of public thinking in a way that instills in every Soviet person an interested, creative attitude and the ability to make effective use of everything already available to us. The conversion of the principles contained in them into the channel of real action is intended to facilitate the establishment of order in production everywhere, the strengthening of labor, production, planning, and state discipline, the economical expenditure of resources, and the rational utilization of the nation's production, scientific-technical, and labor potential with the highest effective return.

"The economic mechanism and the entire system of management," the extraordinary March (1985) Plenum of the CPSU stated, "must be steadily improved in the future as well. Following this road and making optimal decisions, it is important to apply the fundamental principles of socialist

management creatively."³ Rational economic management is today the same urgent demand of the time as the raising of the rate of scientific-technical progress. Only with the aid of one and the other can the material-technical base of our unified multiple-branch national economic complex be dramatically renovated. Only on this basis, can we ultimately resolve the central strategic task posed by the party: the task of coupling the scientific and technological revolution to socialism and raising the productivity of the nation's social labor to the highest level in the world. This will in turn be the decisive prerequisite to raising the well-being of the Soviet people to a very high level and to satisfying their material and nonmaterial needs most completely.

Guided by the directives of the CPSU Central Committee, the Crimean Oblast party organization is systematically and steadfastly promoting economic intensification, the acceleration of scientific-technical progress, the affirmation of economically intelligent management, and a higher return on the Crimea's production, scientific and labor potential. The oblast has amassed a certain amount of positive experience in the party-political facilitation of the resolution of tasks relating to the intensification of the economy, to raising its effectiveness by bringing deep reserves into play (if only partially for the time being), and to the introduction of progressive forms of labor organization and incentives. The present article is focused specifically on these aspects of the activity of the obkom of the Ukrainian Communist Party, on raising our responsibility for seeing to it that the indicated change in orientation of the social consciousness toward the above-indicated problems of improving developed socialism is reliably incorporated in the everyday working life of every collective of Crimeans and of each of its members.

Observing the 40th anniversary of the victory of the Soviet people in the Great Patriotic War through shock work, communists and all working people in Crimean cities and villages are fully resolved to provide a worthy greeting for the 27th CPSU Congress. Crimeans are making a thorough search for additional reserves that must be brought into play more quickly. This is especially important at the finish of the 11th Five-Year Plan.

The efforts of the oblast party organization, which numbers almost 153,000 communists in its ranks, are presently concentrated on reinforcing and developing positive trends in the economy and on securing on this basis the unconditional fulfillment of plan targets in the concluding year of the five-year plan and its socioeconomic program as a whole. This is furthered by our system of forms and methods of party organization and political influence on the solution of pressing tasks of economic construction with due emphasis on the intensification and rationalization of all elements of the production process. And even though the party obkom, gorkoms and raykoms still have much to do to eliminate the system's flaws and to secure its universal application, it has already become the basis of everyday activity of the oblast party organization.

By orienting labor collectives toward mastering the ability to secure maximum yield and highest quality with minimum expenditures of material and labor resources, this system, which we are more and more widely incorporating in the

practice of party management. Convincing confirmation of this point is offered by successes attained by oblast working people in 1984 and in 4 years of the five-year plan. The volume of industrial output increased last year by 3.6 percent and for 4 years by 14.7 percent compared with the plan target of 12.7 percent. There has been improvement in the fulfillment of one of the principal indicators in the plan: product sales with due regard to contractual delivery commitments (99.4 percent in 1984 compared with 98.4 percent in 1981). The oblast's industrial enterprises surpassed labor productivity growth targets for 4 years of the five-year plan: this growth was 2.8 percent in 1984 and 11 percent for 4 years compared with the target of 9.1 percent. Sales in excess of the plan for the 4-year period totalled 348.3 million rubles. The plan for reducing the commodity production cost in oblast industry was fulfilled for 1984 and for the 4-year period. The share of products in the highest quality category rose slightly.

A step forward has been taken in capital construction and at transport and communications enterprises.

Workers in agriculture and the entire agro-industrial complex have scaled new heights. Average annual gross output in 1981-1984 rose by 9.2 percent compared with the corresponding period during the 10th Five-Year Plan. Plans for the sale of fruit, grapes, aromatic raw materials, soy beans, meat, milk, eggs, wool, honey, and silk cocoons to the state were fulfilled for 4 years of the five-year plan.

Last year, kolkhozes and state farms realized the highest gross output for all the years.

The successes that the oblast's working people have attained under the direction of primary party organizations and party raykoms and gorkoms have been appraised according to their merits. Based on their performance in 1984, Crimean Oblast, the hero-city Sevastopol, the Bakhchisarayskiy, Simferopolskiy and Sudakskiy Rayons, and 12 enterprises and farms were winners in the All-Union Socialist Competition and were awarded the Challenge Red Banner of the CPSU Central Committee, the USSR Council of Ministers, the All-Union Central Council of Trade Unions, and the Central Committee of the All-Union Leninist Communist Youth League. Challenge Red Banners of the Ukrainian Communist Party Central Committee and Ukrainian SSR Council of Ministers were awarded to Crimean workers for high indicators in the production and sale of oblast grain, fruit and berries to the state in 1984. The Crimean Oblast was also awarded a certificate for winning the labor competition with workers in Nikolayev and Kherson Oblasts.

Crimeans are justifiably proud of their successes in fulfilling plans and socialist pledges and view the high award from the party as an incentive for new labor attainments in the concluding year of the five-year plan. In this regard, I would like to emphasize that the realistic appraisal of the effectiveness of our continuous party concern for the further, most rational avenues of socioeconomic and cultural development of the Crimea as part of the nation's unified economic complex requires taking one more very important point into account. I refer to the specifics of the party organization's tasks associated with the need to search for an optimal, scientifically

substantiated combination of dynamic economic construction with the integrated development of the resort industry in the Crimea. Such a combination should guarantee the protection of the beautiful nature of the Crimean Peninsula and the use of natural and climatic conditions of the Black Sea coast that are unique to our country for the health restoration and recreation of the Soviet people with due regard to the needs of all society. Such a search is dictated by numerous reasons. I shall merely point out the three most important of them.

First, the fact that the Crimea's health resorts are our national property and a great social acquisition of the Land of the Soviets. Following Lenin's decree "On the Use of the Crimea for the Treatment of the Working People" and owing to the constant concern of the party and the state, they have amassed valuable experience on restoring the health of adults and children. There are presently more than 650 sanatoriums, health resorts and health-improvement institutions in operation in the oblast. They have accommodations for approximately 130,000 vacationers and patients. The total number of persons visiting the Crimea each year for rest and rehabilitation--most of them come without passes and treatment and meal tickets, counting on the hospitality of the local residents and the attention of trade, public catering, municipal service, consumer service, transport, and communications personnel--is almost seven million, which is three times greater than the Crimean population.

Second, the fact that the increased utilization of the Black Sea coast's health resorts intensifies the need for strict measures to prevent the pollution of these zones, adjacent territory, the sea water along the Crimean shores, and the air over them. We are doing a certain amount of work to combat these negative phenomena. Thus, 11 sewage treatment plants and 3 facilities for preventing industrial runoff have been built and put into operation in the oblast's coastal town in recent years and 40 local points of discharge of sewage into coastal waters have been closed down. The establishment of centralized boiler plants using liquid fuel and gas in place of tens of small boiler plants using solid fuel has also played its role. The master plans of cities and settlements call for the gradual removal of all industrial enterprises and economic services to special industrial, municipal service and warehouse territories. In particular, oil dumps, a sewing factory, two automotive enterprises, a motor pool, and a number of other facilities have been removed from Yevpatoriya. Mines have been closed in Gaspra, Simenz, Darsan, and Krasnokamenka. But we realize that the measures that have been taken are not sufficient.

The present strategy of development of Crimean health resorts requires an integrated approach.⁴ The special "Health Resort" scientific program (calculated for the period up to the year 2000 and developed under the direct auspices of the party obkom) corresponds to this task. The program is aimed at improving the construction, operation and organization of the oblast's health resorts and at raising the level of medical, personal, trade, and transport service to working people visiting the all-union health resort. Forty-five of the nation's ministries, departments, and scientific and economic organizations are participating in this work. Party and Soviet organs carefully study all activities and concerns of health resorts and

regularly examine various questions relating to the integrated development of health resorts.

Third, that the need to search for optimal variants of the combination of economic construction with the development of the health resort industry is dictated by the major changes in the oblast's production potential that have already taken place or that are presently taking place and that are fraught with negative consequences for the unique natural and climatic conditions of the Crimea. The Crimea's economic growth rates in the last quarter century have indeed been astonishing. In 1960, the volume of the oblast's industrial output exceeded the prewar level almost 3-fold; in 1970--10.5-fold; and by the beginning of the fourth year of the present five-year plan--42-fold. Machine building, radioelectronics, metalworking, shipbuilding, chemistry, construction materials production; and the light, food, fish, and winemaking industry are the leading branches of Crimean industry.

The chemical industry is developing rapidly under the present five-year plan. The new Sivashskiy Aniline-Dye Plant has been put into operation. The construction of new capacities for the production of polyethylene pipe for agriculture is continuing at the Simferopol Plastics Plant. Construction of the second phase of the Crimean Soda Plant has commenced. And even though the necessary nature conservation facilities are mandatorily commissioned together with these new capacities and all other enterprises in this branch have expanded and technically retooled their production in the first 4 years of the five-year plan, we nonetheless experience difficulty in this regard. For example, it is an unsightly fact that the construction of facilities for eliminating industrial sewage at the Sakskiy Chemical Plant is proceeding slowly.

The living practice and experience of the 4 elapsed years of the current five-year plan have brought many new things into our life; the striving to be faithful to Lenin's behest: to go ever further, ever to strive for more; the multiplicity of levels, complexity and specifics of the problems that arise--all this increases our responsibility for fulfilling everything that must be done today and tomorrow. Analysis of the state of affairs in various branches of the oblast's economy shows that there are still many unutilized reserves, shortcomings and omissions in all sectors. It is especially important that every labor collective fulfill its contractual delivery commitments and find additional reserves for increasing labor productivity in excess of the plan by at least 1.3 percent and for lowering production cost by 0.5 percent.

The rational and effective utilization of the oblast's production and scientific-technical potential and the introduction of scientific discoveries and inventions are a decisive condition to raising labor productivity and consequently to the successful fulfillment of five-year plan targets. Party organizations at the Simferopol Electric Machine Building Plant, in the "Foton" Association, the "Sevastopol Marine Plant imeni Sergo Ordzhonikidze" Association, the "Pnevmatika" Association, and the Simferopol Food Machine Building Plant imeni V. V. Kuybyshev have done a superlative job of promoting the introduction of advances of scientific-technical progress and of increasing the return on existing production capacities.

Thus, for example, in the 4 years that have elapsed since the beginning of the current five-year plan, the electric machine building plant has spent 1.7 million rubles to raise the technical level and re-outfit the enterprise out of the 2.2 million rubles allocated for this purpose under the five-year plan as a whole. It has established businesslike cooperation with many of the nation's scientific research institutes and institutions of higher learning. During these 4 years, it succeeded in increasing output by 67.1 percent with due regard to its economic effectiveness in the national economy. While the plant collective produced 51.6 million rubles' worth of output during the entire 10th Five-Year Plan, it produced 54 million rubles' worth in the first 4 years of the current five-year plan. The introduction of waste-free technologies and the assimilation of new, less metal-intensive products (we note, incidentally, that the plant's product mix will be entirely renovated by the end of the five-year plan) saved 300 tons of rolled ferrous metals and 50 tons of nonferrous metals a year. Work performed by the plant collective, including measures to improve the organization of production and labor, enabled it to raise the share of products in the highest quality category to 90 percent. It is very illustrative and entirely natural that workers of the Simferopol Electric Machine Building Plant occupy their worthy place in the leading group of enterprises in the socialist competition of oblast industrial workers for the growth of labor productivity in excess of the plan in the Crimea. In 1984, they surpassed the planned growth of this key indicators by 3.9 percent.

The collective of the "Pnevmatika" Science-Production Association demonstrates an analogous model of the ability to work with initiative, rationally, with a high return, and with emphasis on intensive growth factors. In 1983 alone, the association incorporated 30 in-house scientific innovations in production with an economic effect in excess of two million rubles. The share of products in the highest quality category reached 80 percent at "Pnevmatika" in 1984, while the above-plan growth of labor productivity was 3.3 percent.

At a sitting of the bureau in October 1984, the party obkom discussed and positively evaluated the purposeful effort of party and trade union organizations and the leadership of the "Sevastopol Marine Plant imeni Sergo Ordzhonikidze" and "Foton" Associations to increase the effectiveness of production through the reconstruction and technical retooling of sectors and shops and the improvement of the working people's social and living conditions. As is known, the first of these associations is renowned for its production of floating cranes with a hoisting capacity ranging between 300 and 1600 tons; the second--for the production of color television sets. A decree of the bureau of the party obkom recommended that party gorkoms and raykoms; primary party organizations; Soviet, trade union and economic organs; and enterprise managers take measures to ensure the broad application of progressive republic and oblast enterprises. The decree emphasized that the reference was to their experience in the more complete utilization of available productive capital, material and labor resources and the social reserves for increasing the effectiveness of production as well as the experience of consistent and active work to renovate fixed capital, especially as a result of the introduction of highly productive equipment, progressive and fundamentally new technologies. Owing to the combination of one and the other, labor productivity in the "Sevmorzavod" and "Foton" associations

increased by more than one-third. They realized an economic effect of several tens of millions of rubles from the introduction of new technology, innovative proposals and inventions during that period.

This was facilitated in no small measure by the Sevmorzavod's new form of controlling the creative search for production reserves and for improving product quality under the motto "Progressive Ideas Into Production." It is a system of councils that have been established in every subdivision. The councils are staffed by specialists, leading production workers, innovators, and representatives of social organizations.

Nonetheless it can be said without the risk of exaggeration that the organizing role of the primary party organizations of these enterprises or the "ability of practical organization," the learning of which, as V. I. Lenin emphasized, is the "most difficult task"⁵ is today the most important component of certain successes that have been achieved by a number of oblast enterprises in their first steps toward the intensification of production. At the same time, under modern conditions, at a time when the need for qualitative change in our economic work is widely and generally recognized, this is the most important task of every party organ, be it a party bureau, the party committee of a primary party organization, a party raykom, gorkom or obkom. And the only one who can carry out this task is one who is capable to bringing into play that which is called the human factors of scientific-technical progress--daring in the creative search for reserves and optimal solutions for the attainment of optimal end results; enthusiasm; the depth of theoretical thought; the boldness of engineering thought; and the patriotic striving of Soviet people to increase the return on their labor.

The party obkom proceeded from these considerations when it developed and introduced the system of basic measures and directions of organizational work relating to the fulfillment of tasks posed by the 26th CPSU Congress with respect to accelerating scientific-technical progress and strengthening the ties between science and production. A meeting of the oblast party-economic aktiv in March 1982 was an important milepost in this regard. Its participants discussed in depth the question of measures to raise the technical level of production and to secure the more complete utilization of the Crimea's production and scientific-technical potential.

I wish to note in this connection that the party obkom in recent years has more actively involved competent economic leaders and specialists in the collective search for the most effective economic management techniques and has emphasized the intensification of organizational and political work directly in primary party organizations and labor collectives. Party gorkoms and raykoms act similarly. Party officials pay more frequent visits to labor collectives and in addition to exercising their oversight function also render specific assistance to cadres at the local level. Appreciable results are also produced by such proven forms of working with cadres as regular talks in party obkoms, gorkoms and raykoms with secretaries of committees of local party organization, enterprise managers, and chairmen of gorispolkoms and rayispolkoms.

It has become our rule to hear reports by enterprise managers on the

introduction of new technology, production processes and progressive knowhow. In 4 years of the current five-year plan, oblast industrial enterprises put mechanized flowlines and automatic transfer lines into operation, totally mechanized and automated 235 shops and sectors, developed 19 prototypes of new types of machines, instruments and automated systems; and modernized a considerable quantity of production equipment. The summary annual economic effect of the introduction of scientific-technical innovations exceeded 102 million rubles.

Our scientists are making a considerable contribution to intensifying and increasing the effectiveness of production. The Crimea has a quite considerable scientific-technical potential at its disposal. Nine academy of sciences institutes, 15 branch scientific research institutes, 4 institutions of higher learning, and 2 affiliates of institutions of higher learning alone employ approximately 4000 scientific associates, including 12 academicians and corresponding members of the USSR Academy of Sciences and UkrSSR Academy of Sciences, more than 200 doctors and approximately 2000 candidates of sciences. Much useful work is also performed by scientists of technological, design and project-planning organizations, experimental farms, and stations. In 4 years of the five-year plan, more than 500 scientific innovations have been introduced in various branches of the national economy; the economic effect was 140 million rubles.

The "Integrated Plan for the Development of Scientific Research and for Promoting Scientific Research and Scientific-Technical Progress in Crimean Oblast in 1981-1985" was formulated because most scientific-technical problems are interbranch problems. It is continuously in the field of vision of the party obkom and its council for promoting scientific-technical progress. According to the plan, scientists' efforts are concentrated in four basic directions of scientific research. The first contemplates the integrated study and development of the World Ocean, oceanology, hydrophysics, hydrochemistry, and hydrobiology and applied research relating to the Azov and Black Sea basin. The second direction is the integrated study of the potential of the recreational development of the Crimea with the aim of creating favorable conditions for the recreation of the working people, of determining health resorts' needs for labor, water and land resources, and of resolving the transport problem.

Considerable scientific effort is devoted to the third direction of research--agriculture. Participating in agricultural research are 14 oblast and southern Ukrainian scientific institutions under the leadership of the Crimean Agricultural Institute imeni M. I. Kalinin, one of the oldest institutions of higher learning which recently celebrated its fiftieth anniversary. Finally, the fourth direction pursues the development of instruments, automated systems of industrial robots and manipulators, and corrosion control. Organizationally, all four scientific directions are represented by integrated oblast programs: "Power Supply," "Agrocomplex," "Health Resort," "Environmental Protection," and "Labor." It is planned to spend almost a half billion rubles on their fulfillment.

Enterprises working under the conditions of the economic experiment (primarily in light industry and the food industry) are the object of our particular

concern. The bureau of the party obkom approved the plan for monitoring the preparation and execution of the experiment and established a commission for coordinating the activity of all its participants. We encourage more initiative at the local level in finding production reserves, in increasing the interest of workers and specialists in the end results of their work and in making thrifty use of resources.

A number of sittings of the bureau of the party obkom examined the question of the further construction of power generating facilities. Special attention is devoted to power construction projects--the Crimean Atomic Electric Power Plant and our country's first experimental heliostation. Their activation will resolve many power supply problems of the Crimea and our neighbors and in industry will produce an effect comparable with the "revolution" that was created in oblast agriculture by the inauguration of the North Crimean Canal. The centralization of heat supply of the cities of Simferopol, Sevastopol and Kerch from existing and rebuilt TETs's [heat and electric power plants] will play its role in the near future. This is very important work in a social sense.

In 1983, there was an event, the significance of which in the energy picture of the oblast, and not only the oblast, cannot be overestimated: the production of natural gas in the first offshore field in the Black Sea. The activation of this field will enable us to more than treble natural gas production!

Builders are confronted with difficult tasks. They are making a considerable contribution to the development of practically all branches of the oblast economy. They put more than 30 key production facilities into operation in 1984 alone. The party obkom, gorkoms and raykoms are devoting more attention to capital construction. Between 1981 and 1984, the Crimea used 4.1 billion rubles in capital investments for the development of the economy, i. e., 8 percent more than during the first 4 years of the 10th Five-Year Plan. The activation of fixed capital outstripped the growth rate of capital investments thereby making it possible to reduce the volume of construction in progress by six percent. We consider this a substantial reserve for curing one of construction's old ailments: "nezavershenki" [unfinished construction projects]. The share of capital investments in the technical retooling and reconstruction of existing enterprises increased by 14 percent.

Builders are making a substantial contribution to the implementation of the Food Program. Every year, the oblast economy uses more than 400 million rubles in capital investments for the development of its agrarian sector. The 400-kilometer water artery of the North Crimean Canal (SKK), which has in large measure altered the face of the oblast's economy and determined the direction of development of Crimean agriculture for decades to come, can truly be considered the oblast's "project of the century."⁶ In addition to being an irrigation source, the SKK has also solved the water supply problem of the hero-city Kerch, Feodosiya, and many settlements and villages. The role of the SKK will be discussed below. Here, it should be noted that it continues to be the most important rural structure. With the activation of the second phase of the canal in the near future, water from the Dnieper will be supplied to Simferopol, Sevastopol and other population centers in the

Sudak resort zone.

The party obkom, gorkoms and raykoms devote particular attention to housing construction. Every year, we put between 800,000 and 850,000 square meters of housing into operation. A large percentage is highly engineered and is made from large-dimension components. The Simferopol and Sevastopol housebuilding combines have demonstrated solid performance during the current five-year plan. Plans for the activation of housing from all sources of financing have been fulfilled in the last 4 years.

The brigade contract has proven itself as an important factor in increasing the effectiveness of construction. This progressive method of organizing and stimulating labor is finding ever broader application with every passing year in the oblast's construction organizations. It is presently employed by more than 1400 brigades that account for more than half of all contractor-performed work. In such key associations as the Krymkanalstroy Administration and the Sevastopolstroy and Krymselstroy trusts, this indicator exceeds 70 percent. Improvement in collective forms of organizing and stimulating labor and of forms of socialist competition in construction made it possible to increase labor productivity in this branch by 3.5 percent compared with last year's level. The target of lowering the cost of construction work performed by contractor organizations has been met. Actual cost was reduced by 14 percent of estimated cost compared with the 11.5 percent reduction called for in the plan.

At the same time, there are many unresolved problems in this leading branch. We have not yet entirely fulfilled the plan for putting completed construction projects into operation on schedule; in a number of instances, their construction time exceeds the norm. Capital investments continue to be scattered over numerous construction projects. Construction combines and trusts are not meeting their conservation commitments and are permitting cements, metal and other materials to be expended in excess of the norm. Construction and installation work is occasionally inferior in quality.

The party obkom continuously calls the attention of the leadership of construction organizations and party committees to existing shortcomings in capital construction and demands the adoption of additional measures to fulfill plans and socialist pledges in this important sector of the work in accordance with the decree of the CPSU Central Committee and USSR Council of Ministers "On Improving the Planning, Organization and Management of Capital Construction" in order to decisively correct the state of affairs in oblast construction. We have the obligation to do our utmost to put an end to the scattering of manpower and resources, to focus them on projects nearing completion, and to reduce the volume of construction in process. To this end, we will continue to improve the organization of labor and working conditions, to improve the utilization of machinery and mechanisms, to raise quality, and to reduce cost. A decision has been made to reduce construction time to between one-third and one-half of the previous level. While this is a difficult task, its realization will enable us to carry out the tasks that have been placed before builders by the party.

The further development of agricultural product has occupied and will continue

to occupy a central place in the activity of the oblast party organization. As we know, the present five-year plan launched the USSR Food Program. The joint efforts of the oblast party organization, Soviet and economic organs in the Crimea formed an oblast agro-industrial association [agroprom].

The oblast agroprom incorporates 119 kolkhozes, 155 sovkhoses, 15 mixed feed plants, 16 dairy plants, 9 meat and poultry combines, 23 juice-winery plants and receiving points, 10 canneries and receiving points, and approximately 600 other enterprises and organizations, the majority of which belong to 15 rayon agro-industrial associations (RAPO's).

Owing to the purposeful efforts of party committees at all levels and ispolkoms, cost accounting is becoming the basic principle governing the interrelations between partners of the oblast agroprom.

Enterprises servicing kolkhozes and sovkhoses returned to them 50 percent of the above-plan profit--approximately 1 million rubles in 1983 and 0.7 million rubles in 1984. The economic effect of reducing rates and costings made it possible to realize 3.2 million rubles in 1984. More efficient oversight has been instituted regarding the fulfillment of contractual commitments. Councils of agro-industrial associations regularly examine questions pertaining to the improvement of cost accounting interrelations. The financial status of kolkhozes has been improved as a result of the enormous assistance of the party and the Soviet government. The profitability of more than half of all farms is high. Practice shows that RAPO's can influence planning more actively and keep a tighter check on the fulfillment of the production program of other participants. However, we have not by any means been successful in achieving this everywhere.

The leadership of the oblast agroprom, selkhoztekhnika [association for the supply of production equipment for agriculture], selkhozkhimiya [association for the supply of chemical products for agriculture], the administration of land reclamation and water resources, "Krymplodoovoshchkhov" [Crimean Fruit and Vegetable Industry], and other organizations must eliminate barriers to the further development of agriculture in the shortest possible time. Kolkhozes, sovkhoses, and other enterprises and organizations have indeed created a mighty production potential. Thus, since the March (1965) Plenum of the CPSU Central Committee, more than five billion rubles have been invested in the development of Crimean agriculture, thereby making it possible to increase agricultural fixed capital more than 4.5-fold, to increase energy per worker 3-fold, and to expand the area of irrigated land to 332,300 hectares or 3.7-fold. Nonetheless, the branch's increased potential is by no means always used effectively. Many farms have not as yet succeeded in attaining the projected yield on irrigated land and the level of productivity varies greatly from field to field and from farm to farm.

A unique feature of Crimean agriculture is that it is carried on in a high-risk drought zone. There is a high degree of variability in the fertility of the land. Therefore, the transformational role of reclamation is very great in our oblast. Only as a result of the construction of the North Crimean Canal has it become possible to transform oblast agriculture into a highly intensive branch of the economy. The purposeful activity of party, Soviet and

economic organs and the selfless labor of the Crimeans have made it possible to increase the rate at which agricultural products are sold to the state. In the last 15 years, grain sales increased 1.9-fold; vegetables--2.1; fruits and berries--5; milk--2; meat--3; and eggs--5-fold. The yield of agricultural crops has been raised sharply. For example, in 1984 the average yield of grain crops in irrigation farming was 48.2 centners per hectare; winter wheat--47.8; winter barley--50.3; and rice--60.4 centners.

The increased effectiveness of reclaimed land is the basis for the further rationalization of land use. This land presently comprises 19 percent of all agricultural land in the oblast and produces 90 percent of the vegetables, 74 percent of the fruit, 50 percent of the feed and 25 percent of the grain. Capital investments in irrigation have been entirely recouped. However the projected yield has been attained on only 54 percent of the land. Consequently, much will still have to be done to produce high, guaranteed harvests on irrigated land and to expand the scale of construction of water management facilities and irrigated areas in the SKK zone.

The completion of the second phase and the commencement of the third phase of the SKK are scheduled for 1986. With the activation of this water development complex, the area of irrigated land in the Crimea will be increased by another 86,000 hectares and will comprise 23 percent of all agricultural land; in keeping with the long-term program, it will total 490,000 hectares by the year 2000. By this time, one hectare in three will be irrigated thereby making it possible to increase agricultural output more than 1.5-fold.

The oblast party organization uses the full gamut of different forms in its effort to improve the utilization of land, to increase the return on the potential that has been developed on kolkhozes and sovkhoses. For example, we have instituted a precise form by which party organs monitor the introduction of innovations. Thus, on the basis of work performed at the local level, kolkhoz chairmen and sovkhos directors submit detailed reports to party raykoms on new, progressive innovations that have been made on their respective farms, on their economic effectiveness and on their innovative plans for the coming year. We are convinced that this will prompt agricultural leaders and specialists to work creatively, with initiative, and ultimately, effectively.

Reports by kolkhoz chairmen and sovkhos directors are summarized by raykoms and are submitted to the party obkom where they are carefully analyzed. Based on these reports, the bureau makes decisions together with recommendations on the dissemination of progressive knowhow in the oblast. For this purpose, the oblast agricultural administration has established a department for the organization of socialist competition and for the introduction of scientific advances and progressive knowhow. A broad network of progressive agricultural experience schools is operating in the oblast and in rayons. For example, an oblast school on producing high corn yields is held every year on the Kolkhoz imeni Kalinin in the Pervomayskiy Rayon. A school on sorghum growing is held on the Pobeda Kolkhoz in the Dzhankoytskiy Rayon; a school on growing soy beans is held at the Crimean Regional Agricultural Experimental Station. An oblast school on the effective utilization of feed in animal husbandry is functioning on the Kolkhoz imeni XXI syezd KPSS in the Krasnogvardeyskiy Rayon. The

highly effective utilization of irrigated land is studied in oblast school on the Kolkhoz imeni Krupskaya in the Nizhnegorskiy Rayon. In each district, there are 5-6 progressive knowhow schools that are attended by at least 8000 agricultural workers. Kolkhozes and sovkhoses have stepped up their work on conceptualizing and applying the experience of the best farms and rayons, leading workers, and production innovators.

In order to carry out the Food Program, oblast workers must produce at least two million tons of grain a year. This target can be met only through integrated measures: the all-round increase in yield as a result of the introduction of zonal, scientifically substantiated agricultural systems, industrial technologies, crop rotation, the effective utilization of machinery and fertilizers, improvement of the structure of crops, seed growing and other intensification factors.

Interesting efforts to find ways of accelerating intensification and of increasing the economic effectiveness of vegetable, fruit and grape growing are continuing.

In accordance with principles of the party program in the sphere of agriculture, the oblast party organization is keeping a special watch on the further development of animal husbandry in an effort to give it a stable character.

Animal husbandry is consequently being systematically converted to an intensive path of development. Reserves in this area are by no means not always fully utilized. Let us take the Sakskiy Rayon as an example. In 1983 the productivity of cows in this rayon was lower than the oblast average and totalled 2871 kilograms. The principal reasons are: shortcomings in the development of the feed base, in breeding work and failure to create good working conditions for milkmaids and other branch personnel. The rayon does not always know how to utilize progressive knowhow which is, after all, everywhere, including the Sakskiy Rayon, where 184 milkmaids produced more than 3000 kilograms of milk per cow.

The events suggest the need for the active introduction of the flowline-shop system on farms, intensive livestock fattening technologies, the development of specialization and cooperation in production, the brigade contract, and other valuable and proven innovations.

Cattle and poultry breeding are our principal meat-producing branches. Beef comprises almost half of all meat production and procurement. Meat poultry breeding, as the most dynamic, highly mechanized and automated branch, will also undergo further development. In 1984, 70,500 tons of meat of all kinds of fowl were sold to the state.

The oblast has devised an integrated program for establishing a reliable and balanced animal husbandry feed base on every farm. Feed production has become an independent, specialized branch on most kolkhozes and sovkhoses. Nevertheless, the present level of development of the feed base does not satisfy the growing needs of animal husbandry. The oblast party organization, Soviet and agricultural organs, and all workers in the agro-industrial complex

are presently working on this problem.

An important place is assigned to working with agricultural cadres and to raising their vocational mastery. Weaker sectors are strengthened by intelligent, experienced officials; training is organized everywhere; and contests and certifications are held. Today, 87 percent of all main veterinarian specialists have higher education. Seventy-six percent of all livestock brigades are headed by specialists. Over 5000 workers are animal husbandrymen first and second class.

Primary party, trade union and other social organizations of late have been devoting more attention to the creation of good working, cultural and living conditions for animal husbandry workers. Better working and living conditions make it possible to interest youth to a greater degree and thereby to resolve more successfully the problem of retaining animal husbandry personnel.

One of the most important factors in increasing the economic effectiveness of agricultural production under the conditions of RAPO and one of the functions of the latter is its increased specialization and concentration. The social division of labor and the diversity of natural and climatic zones in the Crimea promoted the formation of stable, producing types of farms, each of which has a firm combination of main, additional and ancillary branches. Today the oblast has 7 large and 7 small groups of producing types of farms.

Most of the agricultural enterprises are livestock-fruit growing, livestock-grape growing, livestock-vegetable growing, livestock-grain growing, and grape and fruit growing farms. The combination of these branches has a favorable impact on the growth of output and the profitability of production. The location of producing types of farms determines the specialization of rayons. Thus the Krasnogvardeyskiy, Nizhnegorskiy, and Belogorskiy Rayons grow livestock and fruit; the Dzhankovskiy Rayon--livestock and vegetables; the Razdolnenskiy, Pervomayskiy, Chernomorskiy, and Leninskiy Rayons--livestock and grain; the Bakhchisarayskiy Rayon--grapes and fruit. The present location of agricultural production nevertheless requires its further improvement. A characteristic feature of agricultural production is that its product is distributed with due regard to the economic valuation of the land, the fondoosnashchennost [per capita and per worker measures of the potential] of farms and regions, and their manpower supply. Specialization means the concentration of certaintypes of production on certain farms and within departments of farms.

At the present time, more than half of all fruit and berry production is concentrated on 58 farms; 45 percent of grape production--on 42 kolkhozes and sovkhoses; 48 percent of all aromatic crops--at 7 enterprises; and 80 percent of all poultry products--on 23 sovkhoses.

I would particularly like to discuss specialized farms. In 1984, they accounted for almost 42 percent of the oblast's gross milk output, one-fifth of its beef production and approximately one-half of its pork production. The productivity of cows on these farms was 3087 kilograms, which was 84 kilograms higher than the oblast average. The average daily weight gain of feedlot cattle is 21 percent higher than on unspecialized farms. The Kolkhoz imeni

XXI syezd KPSS in the Krasnogvardeyskiy Rayon, the Molodaya gvardiya Sovkhoz in the Dzhankoyskiy Rayon, the Kolkhoz imeni F. Engels in the Sovetskiy Rayon and others can be classified under this heading. Swine on the "Dubki" Sovkhoz, which specializes in the production of pork, gain an average 457 grams a day; the sovkhos expends 6.5 centners of feed units per centner of weight gain.

Twelve specialized farms grow 35 percent of all oblast vegetables in the open ground. The average farm specializing in vegetables has an area of 450 hectares and realizes a profit of 165.5 rubles per hectare; unspecialized farms expend 1.5 times more labor and realize a profit of only 93 rubles per hectare. Thus, for example, the Saki Sovkhoz has 779 hectares under vegetables and expends only 2.8 man-hours per centner of vegetables, which is one-half of the labor expenditure on unspecialized farms; its vegetable yield is 274 centners per hectare. It realizes 543 rubles in profit per hectare of vegetables.

Of course, there are also shortcomings in the work of specialized farms. We are, for example, disturbed by the fact that only 36 percent of the oblast farms have the optimal level of concentration of grapes--500 hectares or more per enterprise; that approximately 24 percent of the orchards on oblast farms have an area less than 100 hectares; that oblast kolkhozes, which on the average plant 70 hectares of vegetables, realize a profitability of only 6 percent; and that sovkhoses belonging to the Krymptitseprom Trust and the Krymsovkhosvinprom Association, where the average farm plants fewer than 20 hectares of vegetables, even produce a surplus.

The party obkom and economic organs are taking measures to raise the level of concentration. There is still little intrafarm specialization. This target is met by RAPO's. It is appropriate to note that the existing Krymsovkhosvinprom, Massandra and Krymplodovoshchkhos Associations, the Krymskaya roza Combine and the Krymptitseprom Trust for the most part correctly understand their role in further intensifying specialization and in raising the level of concentration of production, even though there are also shortcomings in this area as well.

The centralized distribution of resources is also closely associated with these questions. We believe that at the present time, plans, ceilings on capital investments, and stocks of machinery, fertilizers and other material resources should be communicated exclusively to the RAPO's and should not be broken down by departmental channels. The association council itself should distribute resources among farms and partners.

The improvement of the management, specialization and concentration of agricultural production creates the prerequisites for the more complete utilization of cost accounting relations and for the introduction of the collective contract.

The oblast agro-industrial complex is confronted by important tasks in bringing the 11th Five-Year Plan to a successful conclusion and in fulfilling the Food Program. According to the plan for the current year, Crimean farm and field workers should sell the state 750,000 tons of grain, 335,000 tons of

vegetables, 347,800 tons of fruit and berries, 338,000 tons of grapes, 184,000 tons of meat, 670,000 tons of meat, and many other agricultural products. And they, perceiving the party's plans as their own vital cause will spare neither effort nor energy to fulfill them.

The conversion of the economy to the intensive path of development based on the acceleration of scientific-technical progress necessitates the rational use of labor resources. The new conditions of management require a new, scientific approach not only to the organization of production, but also to the problem of improving the organization of labor, the system of wages and work incentives. As we know, the broad application of brigade forms of labor organization in industry and the collective contract in construction and agriculture is one of the important means of resolving this problem.

The significance of labor collectives as educators, mentors and organizers of shock work in Crimean Oblast is steadily growing with each passing year. The influence and strength of production brigades are also growing. Their conversion to the collective form of labor is a matter of great importance. Statistical data show that the number of brigades in oblast industry increased by 15 percent and totalled 9500 during the first 4 years of the current five-year plan. At the beginning of 1984, 73.1 percent of oblast workers belonged to brigades compared with 53.8 percent at the beginning of 1981. The qualitative composition of the brigades has improved substantially as a result of the purposeful work of party committees, primary, trade union and Komsomol organizations, and economic managers. The number of small brigades has declined. There has been an increase in the number of integrated brigades (46.6 percent); in the number of brigades working on the basis of a single contract (80.1 percent); in the number of brigades working under a single contract and the coefficient of labor participation (KTU) (64.7 percent); and in the number of cost accounting brigades (13.8 percent).

The brigade method is developing and improving. Specialized, integrated, and integrated-utility brigades work very effectively under single contracts. The latter work in two and three shifts and frequently encompass the entire production cycle for a given product. In the Simferopol Pnevmatika Science-Production Association, for example, these collectives do not waste time on shift changes, their condition is in the best technical conditions, and their output quality is the highest. All work at another Simferopol enterprise--the electrical machine building plant, where output bearing the state Quality Emblem reached the 90 percent mark at the end of 1984, is uniform and rhythmic.

At this plant, there are no idlers during working hours and smoke breaks have disappeared. Lunch break is strictly according to schedule and it is mandatory that everyone clean up his workplace. The plant's workers and engineering-technical personnel have a sense of collectivism and responsibility for the common cause. What determines the high discipline and organization of the plant's staff? The plant's party bureau considers the introduction of brigade forms of labor organization to be the principal guarantee of success. The plant has established 51 brigades that unite more than 90 percent of all the workers. Forty-eight brigades are paid on the basis of the end result and wages are distributed according to the coefficient

of labor participation. Special attention is devoted to the specialization of sectors and shops, to the establishment of rational production zones for brigades. The norming of labor is being improved, cost accounting is being introduced, and a favorable moral and psychological atmosphere is created. The brigades are formed in such a way as to ensure the maximum effectiveness of utilization of the sophisticated equipment installed in the shops. More attention is devoted to the screening and placement of brigade leaders who are systematically trained.

The efforts of the party organization and the deep interest of each plant worker enabled the collective to significantly surpass plan targets for all technical and economic indicators for 4 years. At the same time, wages rose by 11.4 percent and losses of working time were almost halved.

The effectiveness of work under the cost accounting principle can also be judged on the basis of the experience of a Simferopol plastic accessories factory belonging to the Ukrainian SSR Ministry of Light Industry, where all brigades, incorporating 79 percent of the total work force, have been converted to cost accounting. Foreman-brigade leader V. N. Klyukova heads a leading integrated brigade. The brigade fulfills its monthly targets by 115-120 percent, all members of the collective master two or three allied occupations, and brigade effectiveness records are kept. In the competition for economy and thrift in every workplace, 5200 kilograms of molding material have been economized by the brigade since the beginning of the five-year plan. The brigade is staffed by 60 persons, which is 11 persons less than the calculated number. Labor productivity in 1984 increased by 16.8 percent compared with the enterprise average: 8 percent. The brigade has been awarded the honorary titles: Collective of Communist Labor and Collective of Highly Effective and High-Quality Labor.

Of late, there has been an appreciable increase in the party's influence on the activity of the brigades. For example, in 1984 203 leading workers belonging to production brigades, including 52 brigade leaders, were admitted to party membership at Simferopol industrial enterprises alone. During the report and election period, the brigades created 115 party groups, which was twice as many as there had been at the beginning of the year, and 63 party commissions to monitor the administration's activity in introducing the brigade form of labor organization. In brigades in which one or two communists are working, party-Komsomol groups are established; if there are no communists, primary party organizations appoint party organizers.

More attention is now devoted to raising vocational mastery and to increasing the political and economic knowledge of brigade leaders. A training system has been established for them under party gorkoms and raykoms.

Trade union obkoms together with economic organs have designated for their branches 41 base enterprises for developing the most effective forms of brigade labor organization and work incentives. The great majority of brigades have established trade union groups. The organization of socialist competition among production brigades is being improved. Many collectives have revised the terms of the competition and have increased their orientation the attainment of end results. Party and Soviet organs have raised their

demands on economic managers to create the necessary conditions for the brigades' highly productive work and to closely coordinate the development of the collective form of labor with measures to improve the organization of production and the material and moral incentives of the working people.

The development of brigade forms of labor organization and the implementation of the principles of the law on labor collectives played a large part in strengthening socialist labor discipline and made it possible to improve the utilization of labor resources significantly. Nonproductive losses of working time declined by one-half throughout the national economy as a whole between 1980 and 1984 and personnel turnover declined by one-fourth.

In addition to the broad introduction of advances of scientific-technical progress in production--labor-saving technologies, NC machine tools, robotics, etc.--much attention is devoted to reducing manual labor and to improving the norming and organization of labor. During the years of the current five-year plan, 27,000 persons were converted from manual to mechanized labor. The share of technically substantiated output norms, which has now reached the 78.5 percent mark, is rising each year. All this has created prerequisites for the successful fulfillment of current plans and five-year plan targets for the economic and social development of the oblast. State planning discipline has been raised especially among enterprises operating under the conditions of the economic experiment. The number of enterprises failing to meet the plan targets has been reduced.

As noted above, collective forms of labor organization and incentives are very important in construction. It was specifically in construction the brigade contract appeared for the first time. In 1983, labor productivity in cost accounting brigades was almost 40 percent higher than the branch average. The total duration of housing construction by these brigades declined by 2000 days and the cost of construction declined by 2.4 percent compared with the plan or by almost 4 million rubles.

Of course, notwithstanding what has been accomplished, not everything is as we would like to see it. With regard to the rational utilization of labor resources, there are still many problems that we are continuing to work on. The oblast is remiss in introducing the experience of workers at the Dnepropetrovsk Combine Plant in certificating and rationalizing jobs. There are several reasons for this. One reason is the lack of sufficient initiative at the local level. On the other hand, some ministries and departments have not precisely defined the deadline for performing this work or else have drawn it out for 2-3 years (the Ministry of the Chemical Industry, for example). A number of them have still not provided subordinate enterprises and farms with appropriate methods.

The departmental approach to the utilization of existing production capacities, which leads to the creation of superfluous jobs and hence to the underutilization of capacities, is seriously detrimental to the rational use of the labor potential. As a result, equipment is not operated in a larger number of shifts in general and the output-capital ratio is not rising. Shortcomings in material-technical supply frequently disrupt the work rhythm

of enterprises and nullify the effectiveness of the brigade form of labor organization.

The number of construction projects simultaneously in progress is being reduced at a slow rate and the fact that construction time is very long also leads to the irrational use of labor resources. Oblast party, Soviet and economic organs are aware of these and other shortcomings and are taking the necessary measures to eliminate them.

As regards collective and state farms, which probably have the most favorable conditions for the broad introduction of this progressive form of labor organization and wages, the impetus for its introduction was provided by the 10 May 1983 decree of the Bureau of the Crimean Oblast Committee of the Ukrainian Communist Party "On Strengthening Organizational Work on the Introduction of a Collective Contract in Kolkhoz and Sovkhoz Production." Each sovkhoz and kolkhoz has been assigned targets for the year 1985. Specialists of kolkhozes, sovkhozes and agricultural organs have received instruction on questions pertaining to the collective contract. In order to render practical assistance, the party obkom has conducted oblast scientific-practical conferences and the oblast agricultural administration has published recommendations on the introduction of the collective contract into crop production and animal husbandry, taking the specific conditions of the oblast into account.

Large-scale explanatory work; the dissemination of the experience of the best collectives--the Risovyy Sovkhoz in the Razdolnenskiy Rayon, the Kolkhoz imeni Kirov and the Rodina Sovkhoz in the Krasnogvardeyskiy Rayon, the Vinogradnyy Sovkhoz-Plant, the Sovkhoz-Plant imeni S. Perovskaya, and the Krymsovkhozvinprom Association; and publicity surrounding the activity of the best brigades and links in the periodical press have made it possible to increase the number of contract collectives. The number of contract brigades and links increased from 739 in 1983 to 1385 in 1984. Almost 24 percent of the arable land, including 34 percent of the irrigated land, has been assigned to them. Average annual output per person working on a contract basis crop production in 1984 was 10,800 rubles compared with the oblast average of 5400 rubles; in animal husbandry--16,400 rubles compared with the oblast average of 6900 rubles. Good results have been obtained in the Krasnogvardeyskiy, Simferopolskiy and Razdolnenskiy districts.

As a form of labor organization, the collective contract is based on the more precise division of labor and cooperation in labor and on rational principles of production organization: proportionality, continuousness, coordination, rhythm, and the specialization of labor functions. Also seen are such positive trends as the strengthening of labor discipline, the expansion of self-management status, the inculcation of conscientiousness and responsibility, and the increased solidarity of collectives operating on a contract basis. Its social significance is manifested therein. But the introduction of this progressive form of wages is also encountering obstacles. The degree of effectiveness of the brigade contract is in large measure determined by the level of supply of kolkhozes and sovkhozes with agricultural machinery and spare parts, the orders for which are by no means always entirely filled.

Scientific institutions and industrial enterprises must earnestly concentrate on supplying agricultural enterprises with more highly productive machinery so that they can totally mechanize labor-intensive processes, because collectives operating under the new system are frequently diverted to other work sectors, which reduces their material interest in the end results of their labor and sometimes even leads to their disintegration. On some farms that are faced with a manpower shortage, the administration is unable to assign personnel to a certain, regular work sector; it is not always possible to supply the labor collective with everything indicated on the flowsheet on schedule and hence there are instances when the administration fails to fulfill the terms of the contract; sufficiently substantiated norms are lacking for taking into account differences in the skill levels of personnel in irrigation agriculture and this makes it difficult to apply the coefficient of labor participation.

The oblast party organization is taking measures to eliminate these shortcomings.

The system of base farms plays a certain part in the dissemination of progressive experience in the rationalization of the corresponding links in the production process. Thus, for example, the Vinogradnyy Sovkhoz-Plant has become an oblast school on the collective contract, a school of exemplary economic service and management of agricultural production. Farm managers and chief specialist study the introduction of the rational organization of labor in seminars organized by it. All production subdivisions of the sovkhoz-plant operate under the terms of a collective contract. The contract covers, in addition to basic production, repair shops and other service branches and a processing plant. All this makes it possible to increase the responsibility of every labor collective for its performance and for highly profitable production. The level of profitability in 1984 was 52 percent.

The broad introduction of the brigade form of labor organization and work incentives brooks neither undue haste nor unjustifiable slowness. Oblast party committees have a clear understanding of their objective: to convert all workers to progressive forms of work for the most part already in 1985. The transition to the brigade method of labor affects people's vital interests and involves a fundamental change in their thinking. Therefore, we encourage party organizations to engage in painstaking explanatory work so that the working people would be fully aware of the importance and advantage of forming production brigades.

Kernels of initiative and creativity germinate where there is a proper nutrient medium. Therefore, we try to develop in every labor collective an effective system of economic measures promoting the introduction of the new and the progressive; we establish clearly defined party oversight over their implementation. We strive to see to it that party organizations, using various forms and methods of party organization work, actively promote the sense of personal responsibility of each worker for the activity of his collective. After all, primary party organizations are our support in the struggle for scientific-technical progress, for raising the effectiveness of the return on the production, scientific-technical and labor potential that we have at our disposal. "Party policy here," it was noted at the April (1985)

Plenum of the CPSU Central Committee, "is embodied in real activities. Our successes and shortcomings, our potential and reserves stand out in especially bold relief here."

The successful struggle for the maximum utilization of all possibilities for increasing production and for raising its effectiveness is unthinkable without a proper policy on cadres, without the continuous improvement of all party work with cadres. The tasks that were placed before the oblast party organization in this regard by the March (1985) Plenum of the Ukrainian CP Central Committee require the further strengthening of the cadre potential. The realization of these tasks will help us to significantly improve the management of the intensification of industrial and agricultural production, to secure high results in the execution of the program outlined by the 26th Party Congress and in the future to fulfill the plans that will be indicated by its next, 27th Congress.

FOOTNOTES

1. PRAVDA, 11 December 1984.
2. Ibid., 24 April 1985.
3. Ibid., 12 March 1985.
4. The penchant for building only health resort dormitories was one of the serious shortcomings of recent years. The integrated approach to health resort construction, which has now been affirmed, requires the rational siting and development of health resort regions, of individual sanatoria, and, simultaneously, service facilities for the population and vacationers.
5. V. I. Lenin, "Polnoye sobraniye sochineniy" [Complete Collected Works], Vol 36, p 173.
6. Construction of the SKK began in 1961. Its first phase with an irrigation area of 189,000 hectares was commissioned in 1977. The second phase has been under construction since 1978. Its principal facilities were put into operation in 1984. The connecting canal is 42 kilometers long and each of the four pumping stations has a capacity of 105 cubic meters a second.
7. PRAVDA, 24 April 1985.

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LABOR

POSITIVE WAYS TO RAISE LABOR PRODUCTIVITY

Moscow SOTSIALISTICHESKIY TRUD in Russian No 5, Sep 85 pp 23-30

[Article by V. Vezlontsev, Candidate of Economic Sciences: "Orientation Towards a High Level of Labor Productivity. How To Intensify Stimulation"]

[Text] The results of four years of the current five-year plan testify to the fact that our economy continues to advance confidently along the path of intensive development. In 1984, the utilization of material, labor and financial resources improved somewhat. Labor productivity in industry increased by 3.8 percent. At the same time, by no means is full use being made of the opportunities that are available for further raising it. There are still many problems here which are awaiting solutions. One of them is that of achieving increased growth in labor productivity compared to growth in wages.

Somewhat alarming is the fact that the ratio between the increase in labor productivity and the wages at industrial enterprises, during the first 3 years of the current five-year plan, amounted to an average of 1:0.9. During the 10th Five-Year Plan, this ratio was 1:0.84 and during the 9th -- 1:0.65. True, the situation has recently improved somewhat and yet at many enterprises and even in entire branches of industry it continues to remain unfavorable. In our opinion, this is explained mainly by weak material interest on the part of workers in raising labor productivity. Quite often, there is no difference in the wages being paid to leading production workers and to those who are performing poorly.

A large-scale economic experiment which was started in 1984 and which was primarily aimed at eliminating such wage-levelling and increasing the stimuli for highly productive labor is already producing positive results. Under the new conditions, enterprises began operating in a more rhythmic manner and they are making better use of the resources allocated and raising the technical level of production. The savings realized in the wage fund, within the approved norms, is being used almost completely for incentive payments.

At the same time, many important problems remain unsolved. For example, let us take the status of affairs in the establishment of labor norms. A rather large proportion of the experimental-statistical norms is being retained. The low norms have not been reviewed over a considerable period of time. There is still no efficient system for establishing labor norms, one which would be based

upon strict observance of the principle of wages based upon labor. Lenin's position "For the norm -- a rate," has been buried in oblivion: a wage rate and various bonuses are paid simultaneously for fulfillment of the norm.

In order to correct the situation and ensure a high degree of effectiveness for material stimulation, as noted during the April (1985) Plenum of the CPSU Central Committee, the entire economic mechanism should be reorganized radically on a new basis from the standpoint of quality. The creation of a complete, active and effective system of stimulation requires special attention.

Normative Formation of Wage Funds

The wage fund, which constitutes roughly 90 percent of the overall fund for wages, is formed by an enterprise based upon the results realized from having fulfilled mainly volume (quantitative) indicators. All additional resources of the FZP /fond zarabatoyn platy; wage fund/, obtained as a result of over-fulfillment of the production plan, will be used mainly for increasing the bonuses, additional payments and piece-rate wages for workers. Such payments constitute one fourth to one fifth of the fund. The largest proportion is used for bonuses and yet the overall amount of bonuses is not dependent upon the status of FZP expenditures by sector, department or enterprise.

At the same time, the bonus payments to ITR's /engineering and technical personnel/ and office employees from the FZP, which constitute approximately 3 percent of the overall wage fund, are formed as a rule in advance and are corrected only in small amounts depending upon the degree of fulfillment by an enterprise of its more important quality indicators. Roughly one half of the FMP /fond materialnyy pooshchreniye; material incentive fund/ is expended for bonuses, one-time incentives and for issuing awards to workers.

For enterprises which operate under the conditions of the economic experiment, a new system has been established for forming the FZP and FMP. However, in terms of its economic essence, it resembles more a modification of the existing system in industry, since it is based upon the same principles for carrying out corrections with respect to an increase or reduction in the basic level for the FZP and FMP funds.

Experience indicates that under the conditions of the economic experiment success has still not been achieved in obtaining a closer interrelationship in the material stimulation mechanism between the elements for the formation and expenditure of the wage funds. Obviously, a basic solution can be found for this problem only through the use of qualitatively new methods, which will make it possible to form an overall wage fund at enterprises upon the same principles with which all of the other principal elements of the system for distributing this fund were rather closely coordinated. In the process, it is our opinion that a solution should be found simultaneously for still another important task: eliminate the effect of structural changes in production on the formation of the wage funds. Actually, the system introduced during the current five-year plan for forming the FZP, based upon long-term wage norms per unit of output (NChP), calls for the establishment of this norm in the form of a mean indicator. It is determined by dividing the wage expenditures called for in the plan by the output volume computed in accordance with the

NChP. The long-term norm thus obtained reflects the "achieved level" for wages, corrected for growth in its productivity and established in the plan for the nomenclature of the products. Experience indicates that it is not possible to ensure stability in such norms: quite often they are revised as a result of refinements in the annual tasks in terms of volume, product nomenclature or for other reasons.

When forming the FZP based upon mean norms for wages per ruble of output, which do not reflect the actual improvements in the nomenclature and assortment of the products, the potential of enterprises for increasing the production of high quality products which are needed by the national economy but which are more labor-intensive or of low profitability is often restrained.

The effect of structural changes on volume indicators is relatively low at enterprises having a mass production character and a predominance of equipment processes. But in those areas where unique products are being produced in small series and the nomenclature of the products changes often, the structural improvements are considerable. Experience reveals that it is precisely at such enterprises that a tense situation develops with regard to the FZP and FMP.

In order to increase the effect of the material stimulation mechanism on growth in labor productivity, it is considered advisable to introduce a system for the formation of wage funds at enterprises that is based upon long-term and stable norms, differentiated by years of the five-year plan, per unit of product (by types, kinds, varieties, marks and so forth -- in the normative volume for which the net output norms are established) instead of the wage norms per ruble of output. Today the norms for net output are developed and approved simultaneously with the wholesale prices for the entire nomenclature of finished products. Wage expenditures are included in the norm structure.

The formation of wage funds based upon norms per unit of output will make it possible to ensure their stability and to eliminate the effect of structural changes in production on the amounts of the funds formed.

At the same time, a requirement exists for creating material interest among all categories of workers for accepting tense planning tasks, for achieving high quantity and quality results in carrying them out and for intensifying the interrelationships of elements concerned with the formation and expenditure of the wage funds. This can be achieved in the following manner. It appears to us that the wage norm for industrial-production personnel per unit of output (H) can be computed as follows:

$$H=H_1+H_2.$$

The first part of the norm (H_1) is intended for stimulating the volume or quantitative indicators of production. It is suggested that it be determined for each unit of output based upon progressive norms for labor expenditures, inter-branch and branch norms (less the wages of workers engaged in the development and introduction of new equipment). The first portion of the norm includes: wage rates and salaries and the permanently effective bonuses for adding to them (for work conditions, northern bonuses, payments based upon regional coefficients and so forth) and also payments for carrying out state

obligations, annual vacation payments, severance pay and so forth. The total amount of the funds formed by multiplying the first portion of the wage norm per unit of output (H_1) by the volume of its production (B) is taken into account in the wage fund (FZP) and relates to the production cost as follows:

$$\Phi_1 = \sum_{i=1}^n H_{1i} B_i.$$

The indicated amount of funds must obviously be turned over to the enterprises, just as at the present time, by way of carrying out the plan for production volume.

Since the number of workers engaged at enterprises in the creation and introduction of new equipment is as a rule unstable throughout the year, the funds for their wages (Φ_2) should be computed and approved for the enterprises separately or for the period in which the indicated work was carried out, while taking into account the normative schedules for the turning over of projects for industrial operation. This portion of the wage fund is not corrected for the bank norm and can be expended only for a special purpose. Such a system was established for enterprises which operate under the conditions of the economic experiment. From the wage fund payments are carried out which were formed in accordance with the first portion of the norm (Φ_1) and the funds for paying for work carried out using new equipment and for newly introduced objects (Φ_2).

$$\Phi_{3П} = \Phi_1 + \Phi_2.$$

The second portion of the wage norm per unit of output (H_2) is intended for stimulating high quality final results in the work of enterprises. It appears to use that the effectiveness of the material stimulation mechanism can be raised considerably if the bonus payments which are formed at the present time in the FZP structure and also the payments from the FMP (less one-time assistance) are included in the second portion of the norm.

Thus the second portion of the norm includes for each unit of output and service: payments for overfulfillment of the output norms to piece-workers within limits established earlier (for example, not higher than the average level for the branch); funds for issuing bonuses and one-time and other awards to workers and to ITR's for lowering the labor-intensiveness and the specific norms for the expenditure of material, fuel-energy and other resources and raising the quality of output and also funds for the establishment of bonuses and additional payments which will stimulate growth in labor productivity and so forth. Here it is advisable to make provision for funds, in an amount determined in advance, for the formation of a reserve fund for enterprises for the introduction of new wage rates and salaries.

In order to limit the unsound expenditure of resources from the overall wage fund, it seems to us that neither the first nor the second portion of the norm should provide for payments to be made for deviations from normal working conditions -- for idle time, overtime work and so forth.

Thus the second part of the overall wage norm, which takes into account the qualitative results of the work of collectives, makes it possible to form the overall FP /fond pooshchreniya; incentive fund/ for an enterprise using the following formula:

$$\Phi_{П} = \sum_{i=1}^n H_{2i} B_i.$$

This fund should ideally be formed from withholdings from profits. It is noted that enterprises which operate under the conditions of the economic experiment, particularly enterprises of Minelektrotekhprom /Ministry of the Electrical Equipment Industry/, are authorized to create a common material incentive fund. However, it is formed here by means of the FMP and other resources intended for the issuing of bonuses, with the exception of wage fund resources. It is our opinion that such practice is in conflict with the requirements for a systematic approach for creating a complete material stimulation mechanism. In our opinion, the resources used for issuing bonuses must be concentrated in one overall fund. The amount of resources included in this fund can be determined using methods proven by practical experience, including those employed at enterprises which operate under the conditions of the economic experiment. For a planned change in the amount of resources in the overall incentive fund, a starting point must be the establishment of a maximum limit, differentiated by years of the five-year plan, for example, depending upon the tense nature of the annual planned tasks for output production volume, raising labor productivity, lowering expenses per ruble of commodity output, increase in profits and upon other final operational results of enterprises.

The maximum limit for the overall incentive fund of an enterprise (Π_n) can be expressed by the following formula:

$$\Pi_n = \frac{\sum_{i=1}^n H_i B_i}{\sum_{i=1}^n H_i B_i} 100 \%$$

Let us assume that the following indicators for output production were established for a cement plant

Марка портланд цемента	Выпуск, тыс. т	Нормы оплаты труда	
		общий	в том числе поощритель- ная часть
(1)	(2)	(4)	(5)
500	600	2,11	0,53
400	800	1,92	0,45

Key:

- | | |
|-------------------------------------|--------------------------------|
| 1. Grade of Portland cement | 4. Overall |
| 2. Production, in thousands of tons | 5. Including incentive portion |
| 3. Wage norm | |

For this data, the maximum limit for the overall incentive fund for the production volume planned is:

$$\frac{(0,53 \cdot 600) + (0,45 \cdot 800)}{(2,11 \cdot 600) + (1,92 \cdot 800)} 100 = 24,2 \%$$

The enterprises determine the planned wage fund and the overall incentive fund based upon the norm adopted for the appropriate year, the wage for each unit of output, the planned output production volume in the assigned nomenclature, the approved tasks for growth in labor productivity and for a reduction in

expenditures per ruble of output and other fund-forming indicators. Information on the mentioned funds, as adopted at the present time, is reported to a higher organization, which controls the degree to which the wage fund established by enterprises conforms to the approved norms. The funds for wages must be issued to enterprises taking into account the fulfillment of planned tasks and the peculiarities of the methods described above for forming the FZP and FMP.

It appears to us that the proposed system for forming a wage fund will make it possible to ensure stable norms and to intensify the interrelationship of the wage funds not only with the output volumes but also with the qualitative results of the work of enterprises -- labor productivity, savings in resources and so forth. And a factor that is of considerable importance -- a considerable proportion of the overall wage fund will be dependent upon the tense nature and level of fulfillment of these indicators, since the comparatively constant first portion of the overall norm will consist mainly of payments for wage rates and salaries, the proportion of which in average earnings is just slightly more than one half. The possibility will appear of establishing correct ratios for growth in the incentive portion of wages for manual workers and other categories of workers. The collectives of enterprises are displaying more direct interest in the thrifty use of the wage funds: that portion of a fund that is not used over the course of a year's time can be used for increasing the bonuses or awards for annual work results or for the formation of other funds. That portion of the overall incentive fund that is determined in advance will make it possible to create a reserve fund for an enterprise for the introduction of new wage rates and salaries.

Labor Norms and Wage System

The mechanism for stimulating growth in labor productivity presupposes first of all the existence of sound norms for labor. For it is precisely these norms, through the wage system, that ensure a direct relationship between the operational results of workers and their wage level. However, the overall status of labor norms at the present time is such that they fail to reflect fully the quantitative and qualitative aspects of continuously changing labor and they do not perform any stimulating role.

The proportion of workers, the labor of which has been standardized in accordance with so-called technically sound norms, has exceeded 80 percent for many years now and it continues to increase. At the same time, the level of fulfillment of the norms is increasing annually: today it has reached an average of 125 percent. In the process, there has been almost no reduction in the losses in working time; at many enterprises it remains at the 15-20 percent level. The obsolete norms are being reviewed very slowly and the number of workers released from having to review them is not increasing but rather decreasing.

A deterioration in the quality of the norms is being reflected in the effectiveness of the principal measures concerned with the scientific organization of labor. Computations reveal that whereas in 1976 the introduction of standard plans for organizing labor in the working positions, sectors and departments brought about the release of an average of 140

individuals from every 1,000, at the present time -- just slightly more than 85. The indicator for the relative release of personnel following the introduction of inter-branch and branch norms fell during this period (per 100 individuals) in the case of manual workers -- by more than 10 percent and for ITR's and office workers -- by almost twofold.

The chief reason for the reduction in the role played by the setting of norms for labor, in the mechanism for stimulating growth in its productivity, is explained by the fact that in keeping with the existing level for the wage rates, the labor norms are used at enterprises mainly as a wage "regulator." The authorization to introduce raised wage rates (up to 20 percent) in some branches of industry, for work carried out using progressive and technically sound norms, is making it possible to correct the situation somewhat. Experience testifies to the fact that authorizing enterprises to issue one-time awards from the savings realized from the introduction of technically sound norms and to establish bonuses for adding on to wage rates and salaries for combining professions or for carrying out work with a fewer number of personnel does not promote radical improvements in the setting of norms for labor at enterprises.

It is our opinion that an all-round solution for the problem requires that the mechanism for stimulating growth in labor productivity be based upon a strong foundation, the role of which must be carried out by completely sound labor norms and a wage system. Long-term stabilization of the level for wage rates and salaries and the existing practice of a one-time review of them, mainly by means of the state budget, do not agree with the basic principles of the economic mechanism. True, immediately following a one-time review of the rates and salaries at enterprises, an increase is observed in the interrelationships and degree of balance among all of the principal elements of the distribution system. But thereafter a gradual increase takes place in the trend towards compensation for the lack of balance in the labor norms and rates, in the form of additional bonuses, payments, bonuses and other types of one-time and constant incentives. Moreover, the increase in additional piece-work earnings and bonuses at many enterprises is exceeding to a considerable degree the growth in labor productivity.

Under modern conditions, with the program directed towards the intensive development of our economy being carried out in all areas, an objective need has developed for accelerating the introduction of new wage conditions on another methodological basis. In the process, extreme importance is attached to constantly maintaining the rates and salaries at the socially normal level for requirements and to introduce them into operations using mainly the resources of the enterprises and ministries. The branch ministries must inform the enterprises in advance concerning the amounts of the wage rates and salaries to be introduced during the forthcoming five-year period (for example, in 1986-1990). Based upon the readiness of the enterprises and the branch peculiarities of the ministry, a sequence can be established for introducing the new wage rates and salaries for individual professions and positions. In this regard, an increase will take place in the role played by specialists in connection with labor organization, wages and the establishment of labor norms.

Role of Bonuses and Additional Payments in the Mechanism for Stimulation

Tremendous sums are being expended for the additional payments being issued for the combining of professions and positions, expanding the zones for services and increasing the work volumes in industry. Over the past 4 years, the payments for the combining of professions have increased twofold, the number of workers receiving them has increased by more than a factor of 2.5 and the number of conditionally released workers -- by only 20 percent. At the same time, a reduction has been taking place in the average amount of additional payment being issued per worker. A decrease is also taking place in the proportion of workers released compared to their overall number. What has caused this situation to develop?

Analysis has shown that the combining of professions is taking place in connection with the principal function. More often than not, this becomes possible owing to the low quality of the labor norms. In addition, improvements in equipment, technology and the organization of production and labor at enterprises and also growth in the professional expertise of workers, as a result of scientific-technical progress, are creating prerequisites not only for the direct release of workers. In the work-day plan for a considerable number of these workers, a continual increase is taking place in the proportion of their free and inefficiently used time.

The extensive use in recent years of bonuses and additional payments has been viewed by many economists as one of a number of effective measures for increasing the material interest of workers in raising labor productivity. However, it is our opinion that such an approach is too abstract in nature. Experience in the use of bonuses and additional payments for the combining of professions and positions, for expanding the zones for services and for high quality work is raising a whole series of extremely complicated problems. For example, why is it necessary to establish additional payments for the combining of professions by two workers who were not being adequately worked to begin with? And why must this be done only with the agreement of the workers themselves? The requirement for a systematic approach for forming the material stimulation mechanism for raising labor productivity indicates the need for a more thorough study of the economic essence of our practice.

As a rule, bonuses and additional payments serve as an additional wage measure, as they form a new or higher wage rate or new salary. This is true for all practical purposes, since bonuses and additional payments are abolished or reduced in exceptional cases. They are useful when attempting to compensate for a low level of wages and salaries and thus achieve greater balance in the elements of the material stimulation mechanism -- labor norms and measures for paying for it. But it is not possible to retain over a considerable period of time the required ratios between these elements. The effectiveness of bonuses and additional payments decreases sharply when they are employed on a constant basis. Upon the expiration of a definite period of time, the quality of the labor norms deteriorates, the level of their over-fulfillment increases, an increase takes place in the bonus payments and so forth. Gradually the level of bonuses and additional payments approaches the maximum amounts. When all of the elements of the material stimulation mechanism reach their limits, it becomes uncontrollable. Increases take place in the number of attachments, in the violations occurring in establishing the wage scales or rates, in the number of understated norms and so forth.

In our opinion, such a situation can be corrected only through more regular (than has been the case in past decades) reviews of the wage rates and salaries and the creation of conditions for ensuring more complete utilization of working time, as a result of radical improvements in the establishment of labor norms and the introduction in all areas of completely sound labor norms. It is fully obvious that the combining of professions and positions, even the combining of individual functions, is possible in principle only with an improvement in the use of working time and an increase in the intensity of labor.

It seems to us that the effectiveness of the material stimulation mechanism can be raised only by relying upon high level rates and progressive labor norms. Moreover, the possibility of bonuses and additional payments being employed for higher quality labor is not excluded.

On the one hand, the combining of professions and positions signifies the carrying out of a new and higher labor norm and, on the other, the appearance of a profession or position involving new functions. As is known, a higher payment for work is introduced for the fulfillment of a raised labor norm. An additional payment for a high skill or for professional expertise is nothing more than the establishment of a higher salary or wage rate. It would seem that in all of these instances the new measure for labor payments must conform to the new measure for labor. At the present time, this objective requirement is neither being observed nor controlled at enterprises. The amount of the bonuses and additional payments is often established "by eye" or by intuition. This is usually explained by the absence of adequately sound criteria which would make it possible to coordinate accurately the amounts of the bonuses and additional payments with the additional measure of labor. Quite often, it is for this reason that the additional payments for high skill or professional expertise do not produce the desired effect. More often than not they are constant in nature and are employed mainly as means for raising the wages of a definite group of workers.

In our opinion, at the present time and in the future, up to the introduction of higher wage rates and salaries which reflect the increasing socially normal level of requirements, improvements are required in the system for establishing bonuses and additional payments. The enterprises are carrying out such work and at times they are finding fine solutions for this problem. For example, at the Voskresensk Minudobreniya Production Association a "Technical Passport for a Specialist" has been introduced into operations for each ITR and a system of indicators has been developed for a quarterly evaluation of a specialist's creative labor. At the end of the year, a committee of the association under the chairmanship of the chief engineer summarizes the results, determines the best workers and establishes the bonuses to be added to their official salaries and other types of incentives. Specialists who received such bonuses earlier but who were not included among those entitled to them based upon the past year's results, forfeit the right to receive them. Moreover, workers whose personal labor contribution is evaluated as being unsatisfactory are sent for special certification in order to determine how well then can handle their assigned tasks.

There is obviously no need for establishing bonuses for workers, for whom the combining of professions, positions and functions was carried out for the purpose of filling out their working day.

In our opinion, the amounts of the bonuses and additional payments should be carried out taking into account the criteria for an additional labor measure. Towards this end, it is considered advisable to develop criteria, taking into account the production specifics, for evaluating the degree of the additional workload placed upon workers, upon which the amounts of the bonuses and additional payments will depend and also branch recommendations on the manner in which they are to be used. It is considered advisable for those individual groups of professions and positions, for whom the combining or expansion of zones is economically justified and technically possible, to define the system for the mandatory establishment for them of higher labor norms (norms for services, for personnel strength and so forth).

It seems to us that a comparatively high wage level for workers in many professions tends to diminish the stimulating role played by additional payments for work carried out with fewer personnel. At the same time, new stimuli for raising labor productivity form in connection with growth in their welfare. In all probability, this circumstance should not be overlooked when carrying out improvements in the stimulation mechanism. Sociological studies have shown that the effect of the "wage level dissatisfaction" level is decreasing with each passing year. First place is being taken over more frequently by socio-economic requirements. In view of this fact, consideration should be given to the possibility of granting to workers a definite number of additional paid vacation days for work carried out with fewer personnel instead of additional payments. In making payment for these days, use can be made of a portion of the overall FZP /wage fund/ savings, formed from the release of workers. In addition, such additional vacation days should be abolished just as soon as the quality of the work deteriorates. It makes sense to make preparations for and to carry out an experiment at several enterprises of various industrial branches, over a period of 2-3 years for example, in connection with the introduction of the mentioned vacation days for those who are amenable to it. It is expected that in this manner it will be possible to increase the annual release of workers by 2-3 percent. Our computations reveal that roughly 0.5 percent of the FZP savings formed from a reduction in personnel strength will be required for paying for such vacation days.

In our opinion, the implementation of the mentioned recommendations will make it possible to improve substantially the work concerned with stimulating growth in labor productivity. This work can be accelerated by including a check on the individual recommendations as a condition for the large-scale economic experiment being carried out at the present time.

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LABOR

EXAMPLES OF MANPOWER FLUCTUATIONS IN KIRGHIZ LABOR COLLECTIVES

Moscow EKONOMICHESKAYA GAZETA in Russian No 37, Sep 85 p 22

[Article by M. Shamenov, first deputy chairman of the Kirghiz SSR State Committee for Labor and Social Problems: "Stop the Loss of Work Time"]

[Text] Recently, much has been done among Kirghiz labor collectives to reinforce socialist labor discipline. The activity of their subordinate units is analyzed at meetings of the councils of ministries and departments. The fulfillment of measures specified in this plan is controlled. Various forms of influence are used on subordinate organizations. For example, the Ministry of Rural Construction of the republic held three on-site sessions at the Issyk-Kul, Dzhahalal-Abad, and Osh rural construction trusts. Concrete talk and action resulted in a noticeable strengthening of on-the-job performance.

Analysis has shown that, in most cases, major expenditures or substantial reorganization is not required to more productively utilize working time.

Here is a specific example. At the Kadamzhay antimony combine, the professional committee accurately audited the working time lost in all of the shops and other line subdivisions. This made it possible to detect the basic causes of infractions of labor discipline. It turned out that production rhythm was not smooth, and this led to overtime. Not all of the shops observed the requirements of safety precautions and occupational hygiene.

A complex plan to eliminate deficiencies was formulated. Its implementation permitted a three-fold reduction in the duration of overtime jobs within one year and a reduction in sick leave taken, especially as a result of job-related injuries.

Other examples can be provided. They all attest to the stabilization in production collectives, strengthened labor discipline, and reduced losses of working time. Because personnel turnover and losses of working time were reduced, in the industrial sector of the republic alone, the labor of four thousand people was saved, and in the construction sector, the labor of three thousand people.

However, all of this cannot hide the fact that there are still many deficiencies in the process of strengthening socialist labor discipline. A

full audit of lost work time has not been made everywhere. Photographs of the work day taken periodically do not reveal the underlying causes of idle people and equipment, but only freezes them in time.

The aforementioned applies primarily to the enterprises of the Ministry of the Fruit and Vegetable Industry and the Ministry of the Food Industry, to the Frunze maintenance works of the all-union production association, and construction administration No. 16.

At many enterprises, production irregularity persists for years. A computer plant is in its third decade of producing a maximum of 80 percent of monthly production quotas (director Comrade Bezzhon). The Issyk-Kul association of electrical equipment plants (general director Comrade Dzhunushev) is producing a maximum of 60 percent of its quota, and at the Mayli-Saysk plant Kirgizelektroizolit (director Comrade Kilkyayev), a maximum of 45 percent of the quota is being produced. This leads to shock work, working on days off, and wasted time.

In some places, the laws set forth in the labor code are not applied when dealing with infractions of discipline. At the Frunze plant Kirgizelektrodivigatel, the number of absentees increased 1.4 times. It would seem that this would concern the management of the enterprise. As it stood, the situation in the collective required stronger disciplinary action. However, out of 106 absentees, only 39 had their vacation time docked by several days, and five were transferred to lower-paying jobs. The rest of the violators went virtually unpunished.

For the republic as a whole, only 45 percent of the violators of labor discipline had their vacation time docked, including 35 percent in the Ministry of Procurement system, 30 percent in the Kirghiz SSR main Administration for Water Resources Construction system, and 25 percent in the construction materials industry. This means that up to eight thousand absentees walked away from the legal consequences of their actions, including more than five thousand industrial employees. This practice led to a greater number of infractions in many work-forces, including the Kyzyl-Kiysk mining administration and the republic's Ministry of the Food Industry and Ministry of Local Industry systems.

Procedure has not been established for the administrative allocation of leave time. At the production associations Kirgizavtomash and Kirgiztorgmash and at other machine building enterprises, the requirement of subsequently working off this kind of leave is disregarded. This also counts as labor losses.

Often, enterprises within the jurisdiction of the same ministry or department and operating under roughly the same conditions vary considerably in levels of lost working time and numbers of regulations infractions for long periods of time. In the Ministry of Procurement system of the republic, the levels of personnel turnover vary considerably among the enterprises subordinate to the departments: from 6.2 percent at the Tokmak grain products combine to 28 percent at the Rybachinsk combine. At the Yuzhvodstroy trust, 312 of the 1,346 workers are absentees, and at the Issyk-Kul trust, where there is a

total of 489 workers, the number of absentees has reached 323. Both trusts are subordinate to the Kirghiz SSR main Administration for Water Resources Construction. The administrative organizations named have not looked deeply into the causes of such deficiencies and have not taken decisive steps to eliminate them.

Much damage is being done by personnel turnover. The administration of the Issy-Kul shipping lines, the Ministry of Construction Materials, the Kirghiz SSR main Administration of Water Resources Construction, and the Kirghiz Electric Power Plant Construction administration have the worst record in this regard.

The executives of the ministries, enterprises and organizations, and departments must analyze in depth the state of affairs regarding the reinforcement of labor discipline and take concrete steps to correct the situation.

The effort to economically utilize working time and to reinforce discipline and job performance is not a temporary campaign, but constant, painstaking work. Social organizations and governmental bodies must actively participate in this campaign alongside ministry, department, and labor force executives. Our committee on labor and social questions should also speak out on this problem.

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LABOR

IMPROVED SOCIAL SECURITY BENEFITS FOR PENSIONERS DETAILED

Moscow SOTSIALISTICHESKAYA ZAKONNOST in Russian No 10, Oct 85 pp 53-55

[Article by A. Solovyev, deputy chief of the USSR Goskomtrud's Social Security Administration: "New Steps to Improve Pension Security"]

[Text] CPSU Central Committee, USSR Council of Ministers and AUCCTU Decree No 436 of 14 May 1985 "On Top-Priority Steps to Improve the Material Well-Being of Poorly Provided-For Pensioners and Families and to Intensify the Care of Single Citizens" (SP SSSR [SOVIET LAW], No 17, 1985, p 80) outlines a broad program of additional steps in the interests of raising the standard of living of the people, foremost with regard to those categories of the populace less well provided for. The most important of these are connected with increasing monetary payments to pensioners.

The decree recognizes the necessity of raising minimum old-age pension amounts for kolkhoz members from 28 to 40 rubles per month and of increasing disability pensions and loss of bread-winner pensions, as well as raising the pensions for workers, employees and their families, set at up to 60 rubles more than 10 years ago, to bring them up closer to the levels of the pensions now set for workers in analogous occupations and of similar skills. This goes into effect on 1 November 1985.

A USSR Supreme Soviet Presidium Ukase was issued on 22 May 1985 "On Further Improving Pension Security for Workers, Employees, Kolkhoz Members and Their Families," and a USSR Council of Ministers Decree, No 568 "On Changes to the Statute on Procedures for Authorizing and Paying State Pensions and the Statute on Procedures for Authorizing and Paying Pensions to Kolkhoz Members" (VEDOMOSTI VERKHOVNOGO SOVETA SSSR [USSR Supreme Soviet Herald], No 22, 1985, p 391; SP SSSR, No 19, 1985, p 90), was adopted on the basis of this ukase on 20 June 1985.

These documents actualize the decision to effect a major complex of steps regarding pension security which were outlined by the 14 May 1985 CPSU Central Committee, USSR Council of Ministers and AUCCTU decree.

The new resolutions cover 7.5 million pensioners who are workers, employees and members of their families and 6.2 million kolkhoz-member pensioners. Nearly two billion rubles per year will be spent on these goals.

HOW WILL RAISING THE PREVIOUSLY AUTHORIZED PENSIONS TO THE LEVEL OF THOSE BEING AUTHORIZED TODAY FOR WORKERS IN ANALOGOUS OCCUPATIONS AND OF COMPARABLE SKILLS BE ACHIEVED? According to the supplements made to Article 13 of the Law on State Pensions and in accordance with Article 19 of the Statute on Procedures for Authorizing and Paying State Pensions (subsequently referred to as "the Statute"), old-age pensions will be paid at not more than 60 rubles per month, that is, for wages of up to 120 rubles per month, inclusively; 10 years after the pension has been authorized (or 10 years after the pension has been recalculated for a higher wage under Article 125 of the Statute, if this is done), it is raised by one percent of the wage for which it has been calculated for each full year which has passed since authorization (recalculation) of the pension.

THE BASIC PENSION AMOUNT CALCULATED FROM A WAGE NOT EXCEEDING 120 RUBLES USING THE STATUTE ARTICLE 19 SCALE IS INCREASED BY AN AMOUNT DETERMINED AS A PERCENTAGE OF THE WAGE. In this regard, the percentage amount is numerically equal to the number of full years which have passed from the day the pension was authorized (recalculated) to 1 November 1985.

HOW WOULD AN OLD-AGE PENSION BE INCREASED, AND BY WHAT AMOUNT, IF CALCULATED FROM 16 DECEMBER 1967 FOR A WAGE OF 90 RUBLES? Using the existing scale, the amount would be 52 rubles (lowest amount). Inasmuch as 17 full years will have passed as of 1 November 1985, the pension will be increased by 17 percent of the wage as of 1 November, that is, by 15.3 rubles ($90 \text{ rubles} \times 0.17$) and will be 67.3 rubles ($52 \text{ rubles} + 15.3 \text{ rubles}$).

THE WAGE REFLECTS OCCUPATION AND SKILLS. For this reason, the increase in pension to a set norm in percentages of wages from which the pension is calculated bring the pensioner closer, in effect, to a worker of comparable skill who is retiring today, in terms of pension level.

PROCEDURE FOR RAISING OLD-AGE PENSIONS CALCULATED FROM 120 RUBLES. The procedure for raising a pension is used in full for those pensions which were calculated from a wage of up to 120 rubles, inclusively, and restrictions on this increase have not been established (up to the maximum currently in effect, of course). For example, a pension was authorized in 1965, 20 years ago, for a wage of 120 rubles and was set at 60 rubles (the basic amount), that is, 50 percent of the wage. As of 1 November, this pension will be increased by 20 percent of the wage (120 rubles), that is, by 24 rubles ($60 \text{ rubles} + 24 \text{ rubles} = 84 \text{ rubles}$). In other words, the pension increases by 40 percent.

PROCEDURE FOR RAISING PENSIONS CALCULATED FROM A WAGE OF 130 RUBLES AND AUTHORIZED AT 65 RUBLES 20 YEARS AGO. If it is retained unchanged, a paradox arises. The pension of a more-skilled worker, calculated from 130 rubles 20 years ago, turns out to be less than the pension of the less-skilled worker when calculated from 120 rubles.

The legislator anticipated such a situation. Article 13 of the Law on State Pensions and Article 19 of the Statute establish that in all cases, pensions authorized simultaneously from a wage over 120 rubles cannot be less than pensions calculated from a wage of 120 rubles. Therefore, beginning 1 November 1985, the basic pension amount calculated from 130 rubles would be increased in our example to 84 rubles.

PROCEDURE FOR CALCULATING TO A HIGHER BASIC AMOUNT SUBJECT TO SUPPLEMENTS. THEY WILL BE CALCULATED UNDER CURRENT RULES.

A pensioner for which a pension of 66 rubles was calculated 20 years ago would, in the example given above, be entitled to a 10-percent supplement for continuous employment. Inasmuch as the basic pension amount is now 84 rubles, the 10-percent supplement to it must be calculated at 8 rubles 40 kopecks. As of 1 November 1985, the pension and supplement will be 92 rubles 40 kopecks (84 rubles + 8 rubles 40 kopecks), instead of 66 rubles. Consequently, both the 60-ruble pension (calculated from a wage of 120 rubles) and higher pensions will be increased.

It must be stressed that the procedure for increasing pensions applies only to the basic amount. For the remainder, the calculation procedure remains unchanged. Thus, if the pension to be raised has been set at the minimum amount, the total increase is added not to the minimum, but to the basic pension amount as calculated from the wage. In this instance, the rule in Article 136 of the Statute is in effect.

HOW WOULD AN OLD-AGE PENSION BE INCREASED, AND BY WHAT AMOUNT, IF CALCULATED FROM 1 JULY 1970 FROM A WAGE OF 70 RUBLES? A pension authorized on 1 July 1970 for a wage of 70 rubles is being paid in the minimum amount of 50 rubles.

As of November 1985, the basic pension amount calculated using the Statute Article 19 scale will be increased by 15 percent, or 10 rubles 50 kopecks (70 rubles X 0.15). The pension on a wage of 70 rubles is 65 percent, that is, 45 rubles 50 kopecks. The new pension amount would be 65 rubles (45 rubles 50 kopecks + 10 rubles 50 kopecks).

DOES THE RULE ESTABLISHED BY THE STATUTE THAT AN OLD-AGE PENSION PLUS ALL SUPPLEMENTS MUST NOT EXCEED 100 PERCENT OF THE WAGE FROM WHICH THE PENSION IS CALCULATED APPLY? No, this rule is not used for the higher pensions; they may exceed 100 percent of the wage. A corresponding stipulation was made in the new edition of Article 139 of the Statute. For example, an old-age pension authorized on 1 January 1960 for a wage of 55 rubles is being paid in the minimum amount of 50 rubles, in spite of the entitlement to a 10-percent supplement for continuous employment, inasmuch as the pension does not reach the minimum, even with this supplement. Beginning on 1 November 1985, it will be increased to 61 rubles 88 kopecks, that is, it will exceed 100 percent of the wage.

DOES THE PENSION INCREASE PROCEDURE OUTLINED ABOVE EXTEND TO PENSIONS AUTHORIZED IN PREFERENTIAL AMOUNTS FOR WORK UNDERGROUND, WORK IN HOT SHOPS OR WORK CONNECTED WITH OTHER HAZARDOUS WORKING CONDITIONS (BASED ON LIST NO 1)? According to the Statute Article 19 scale, the preferential amounts are five-percent of the wage higher than the total amounts of the old-age pensions. In particular, using the general norms for wages above 110 rubles, the [old-age] pension is 50 percent and the preferential pension is 55 percent of the wage. Consequently, the preferential amount from a wage of 120 rubles is 66 rubles. A pension authorized in this amount more than 10 years ago is to be increased, with the full norm of the increase to be applied. Thus, a pension authorized 16 years ago will be increased by 16 percent of the wage, or by 19 rubles 20 kopecks, and will be 85 rubles 20 kopecks. This is the basic amount. But if

the pensioner is entitled to a 20-percent supplement for continuous employment (in this instance, 20 percent of 85 rubles 20 kopecks equals 17 rubles 04 kopecks), then the new pension amount will be 102 rubles 24 kopecks (85 rubles 20 kopecks + 17 rubles 04 kopecks).

PROCEDURE FOR INCREASING OLD-AGE PENSIONS IF EMPLOYMENT IS NOT CONTINUOUS. Everything relating to the increase in old-age pensions for full employment authorized more than 10 years ago also extends to a pension of this type established for non-continuous employment. The only difference is that the full pension amount calculated using the adjusted rules is reduced proportionally to the employment term. Take, for example, a full pension authorized in October of 1970 for a wage of 120 rubles. As of 1 November of this year, its amount (excluding supplements) will be increased from 60 to 78 rubles, that is, by 18 rubles, or 15 percent of the wage for the 15 years the person has been on pension. If the pensioner has half the needed employment term (for example, a woman who has 10 years instead of 20), then under these conditions, the pension will be increased, beginning 1 November, from 30 to 39 rubles, which is half the full increased old-age pension.

DETERMINING THE TERM FOR RECALCULATING A PENSION. Institution of this mechanism is being broken down into two stages: 1) a one-time recalculation of pensions authorized prior to 1 November 1975; 2) recalculation of pensions authorized after 1 November 1975. This second stage will be continuous, inasmuch as a certain number of pensioners will reach the 10-year pension period each day.

Old-age pensions authorized after 1 November 1975 will be increased when the 10-year mark following pension authorization (recalculation) has been reached using the rules detailed above, the only difference being that the norm for increasing the pensions will be 10 percent of the wage in all cases, that is, equal to the number of full years which have passed since the pensions were authorized.

In this regard, the pension increase will be effected from the first day of the month in which the 10 years since the day the pension was authorized are up, if this occurs prior to or on the 15th of the month, and on the first day of the following month if it falls after the 15th, that is, according to the rules in Article 158 of the Statute. For example, a pension authorized on 14 November 1975 will be increased beginning 1 November 1985 and a pension authorized on 16 November 1975 will be increased beginning 1 December 1985.

At the same time, however, all pensions authorized prior to 1 November 1975 and falling within the purview of this procedure will be increased at the same time, as of 1 November 1985.

PROCEDURE FOR INCREASING DISABILITY PENSIONS AND LOSS OF BREAD-WINNER PENSIONS. Everything said with regard to old-age pensions applies correspondingly to Group I and II disability pensions and to loss of bread-winner pensions for two or more family members authorized more than 10 years ago for a wage of not over 120 rubles. These pensions are calculated in percentages of old-age pensions. For job-related disabilities or occupational diseases, the basic pension amount is 110 percent of the old-age pension, as calculated for an identical wage, for Group I and 100 percent for Group II. For non-occupational diseases, these

norms are 100 percent and 90 percent of the pension, respectively. For three or more family members, the pension is authorized in the exact same amounts as a Group I pension, and for two family members -- as for a Group II disability pension.

Groups I and II disability pensions for fixed-period military personnel are also calculated in percentages of the old-age pension. The pension amount may also be increased for them, given the above-indicated conditions, for that reason.

Thus, a Group II disability pension for non job-related illness has been authorized on 1 November 1974 for a wage of 115 rubles. The old-age pension amount for this wage is 50 percent, or 57 rubles 50 kopecks. For a Group II disability, 90 percent of this sum is used, so the pension paid is 51 rubles 75 kopecks. As of 1 November 1985, the pension is raised to 63 rubles 14 kopecks. This sum is 90 percent of the old-age pension as calculated using Article 19 of the Statute with consideration of its having been received for 11 years. The old-age pension amount is 70 rubles 15 kopecks (57 rubles 50 kopecks - the basic pension amount from the scale + 12 rubles 65 kopecks, that is, 11 percent of 115 rubles).

PENSION FOR LOSS OF BREAD-WINNER who has died due to non job-related illness, for two family members and authorized on 1 November 1970 for a wage of 118 rubles, is 53 rubles 10 kopecks (90 percent of 59 rubles, that is, of the old-age pension as calculated using the Statute Article 19 scale). As of 1 November 1985, the pension will be increased to 69 rubles 03 kopecks, that is, to 90 percent of 76 rubles 70 kopecks, the new basic old-age pension amount: 59 rubles is the old basic old-age pension amount + 17 rubles 70 kopecks (15 percent of a wage of 118 rubles over 15 years).

Under articles 70 and 71 of the Statute, the pension paid from a wage not exceeding 120 rubles per month to families with one family member not able to work is raised by 0.5 percent of the wage from which it was calculated for each full year which has passed since the pension was authorized; this is done 10 years after then pension is authorized. In this regard, pensions calculated for a wage of over 120 rubles may not, other conditions being equal, be less than the pensions calculated from a wage of 120 rubles.

For example, a pension in the amount of 28 rubles 60 kopecks, with a 10-percent supplement for continuous employment of the bread-winner, is authorized on 1 July 1975 for a wage of 120 rubles for one family member of a worker who has died as a result of a non job-related illness. The basic amount is 26 rubles. As of 1 November of this year, it must be increased by five percent of the wage, that is, by six rubles. The new basic pension amount is 32 rubles, but the pension paid including the supplement increases to 35 rubles 20 kopecks.

When increasing a loss of bread-winner pension, the 10-year period is calculated from the day the pension was authorized. However, in accordance with the last paragraph in Article 84 of the Statute (new edition), when increasing a loss of bread-winner pension authorized for the family of the deceased pensioner, the date the pension was authorized is considered the day the bread-winner's pension was authorized.

The minimum pension amount paid for at least 10 years also increases as of 1 November 1985: from 50 to 55 rubles per month for old-age, Group II disability and loss of bread-winner for two family members unable to work; it increases from 28 to 31 rubles for one family member unable to work (loss of bread-winner pension).

The 10-year period which entitles one to a higher minimum pension amount is determined from the day a given type of pension is authorized, regardless of whether or not the pension was recalculated from a higher wage after that period.

Pensions paid for more than 10 years which have not reached the indicated minimum amounts, including those raised in accordance with the procedure outlined above, are brought up to those amounts.

Pensions authorized for chairmen, specialists, chief (senior) accountants and machine operators on kolkhozes and for their families under the Statute on Procedures for Authorizing and Paying State Pensions in accordance with USSR Council of Ministers Decree No 622 of 20 July 1964 are to be raised on the exact same bases as those for workers, employees and their families (SP SSSR, No 13, 1964, p 89).

Under the Statute (articles 19, 70 and 71), subsequent increases in pensions recalculated after 10 years (or more, in the first stage) will be made every two years. In this regard, old-age pensions, Groups I and II disability pensions and loss of bread-winner pensions for two or more family members are increased by two percent of the wage (by one percent for one family member).

The first two-year recalculation will be made for 1 November 1987 simultaneously for all pensioners for whom pensions were authorized prior to 1 November 1975 and will first be raised beginning on 1 November 1985. Pensioners for whom pensions were authorized after 1 November 1975 will have their pensions raised correspondingly every month, depending on the date of the first recalculation, after 1 November 1987. Local social security departments have been instructed to make the pension recalculations by 1 November 1985.

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LABOR

MANPOWER SHORTAGE IN CONSTRUCTION JOBS FOR UzSSR CITED

Tashkent EKONOMIKA I ZHIZN in Russian No 8, Aug 85 p 47

[Article by I. Tokhtamyshev, section head of worker youth for Komsomol council for the municipality of Tashkent: "I'm Asking To Be Laid Off"]

[Text] Manpower turnover in the construction industry is a severe problem. A significant number of workers request to be relieved of duty in Glavtashkentstroy and Ministroy UzSSR each year.

Although the volume of construction and assembly projects has grown, the supply of workers to construction organizations declined significantly in 1984 as compared to 1980. The drain of specialists involved in auxiliary production is especially large.

Is it possible to slow down the process of manpower turnover and attain a high degree of stability in terms of worker crews? Only careful study and analysis of the factors influencing the individual's decision to leave the construction site can provide a positive answer to that question. Let's note: Research recommending a lower percentage of workers asking to be relieved of duty will yield a two-fold benefit to the construction industry. First, a comprehensive study on developing existing manpower will minimize superfluous relocation of construction workers, Secondly, new and more effective means of recruiting construction workers will surface.

Let's look at the first atage--researching the reasons for workers asking to be relieved of duty. In order to ascertain this, the Komsomol council for the municipality of Tashkent surveyed workers and those asking to be relieved of duty in Glavtashkentstroy and Ministroy UzSSR for two summer season (1983 and 1984).

What are the basic reasons prompting an individual to leave the construction site? An uncreative job, poor organization of the work, difficult working conditions without adequate pay in some cases, unacceptable interaction or rapport among crew members, and personal reasons.

Research has shown that, among those asking to be relieved of duty, especially young workers, there was not one but several reasons of decisive significance. For example, a higher salary in a neighboring organization can

motivate an individual to switch over, especially if he is not satisfied with the nature of his job. Different factors might influence one worker more than another.

An analysis of reasons for worker-requested layoffs reveals that such requests declined ten-fold among workers with ten years of seniority in Glavtashkentstroy and twenty-fold for the same level of seniority in the republic's Minstroy. Here we must focus on the professional skills of those requesting layoffs, since it is young workers with little time on the site who complain about the time it takes to obtain an upgrading of classification or a raise. While the proportion of worker II and worker III classifications among those who voluntarily left the site was 26 and 32.5 percent in Glavtashkentstroy and 39.2 and 22.6 percent in Minstroy in 1980, in 1983 the figures were 33.5 and 34 percent, and 51 and 26.6 percent respectively. There was a simultaneous decline in manpower turnover among highly-skilled construction workers (IV, V and higher): 7.7 and 1.1 percent in Glavtashkentstroy and 1.1 and 15.2 percent in the republic's Minstroy. We must point out here that with the increase in pre-fabricated members for construction and the greater use made of plant-produced parts and components, there is less and less on-site demand for highly-skilled specialists--most on-site jobs are done by level II and III construction workers. And since these groups are requesting layoffs in ever-increasing numbers, completion of construction work is being noticeably delayed.

Adequate housing for workers' families is a major factor in maintaining and developing the young people on site. Survey data indicates that 20.8 percent of those requesting to be relieved of duty from organizations of Minstroy UzSSR did so due to inadequate housing.

A comparison of our data with the results of a sociological survey done in the sector in 1970 by the Tashkent Institute of Domestic Economy could give weight to the idea of slow promotions and the attendant low salaries of construction workers. While roughly ten percent of those surveyed in 1970 gave inadequate salary as the reason for requesting layoff, in 1983 the figure had risen to 17.4 percent.

These two factors--poor housing and low salary levels due to slow reclassifications--have an especially severe effect on the trainability of the graduates of vocational and technical schools for the construction industry. In fact, of 620 graduates placed from the State Vocational and Technical School's 1983 graduating class, at the start of the year there were 192 left working on Tashkent sites, i.e., thirty percent of all the graduates. During the course of 1983, 150 persons who had graduated from the SVIS in 1981 requested layoffs, and about as many of the 1982 graduates did the same.

There is a great deal of attention paid to organization of the work in research on the reasons for worker turnover. On a positive note, only 3.9 percent of those requesting layoffs from construction organizations of Minstroy UzSSR gave unsatisfactory organization of working conditions as a reason. On the other hand, in Glavtashkentstroy 17.3 percent left the construction site for that reason, and more than half of them had beginners' skills.

There is a great deal of attention paid to organization of the work in research on the reasons for worker turnover. On a positive note, only 3.9 percent of those requesting layoffs from construction organizations of Minstroy UzSSR gave unsatisfactory organization of working conditions as a reason. On the other hand, in Slavyashkentstroy 17.3 percent left the construction site for that reason, and more than half of them had beginners' skills.

Why? Compared with 1980, the supply of excavators on Slavyashkentstroy sites has increased by only 6.6 percent, that of tractors and mounted excavating equipment by 19.5 percent, and that of pipe-laying equipment by 10.5 percent. The quantity of bulldozers, excavator cranes, scrapers, portable cranes and road graders has practically remained the same. There is very little low-grade mechanization on Tashkent sites--in particular, accessory work is done the old-fashioned way, by hand, with great losses in labor. Naturally, this does not sit well with the construction workers, especially the young ones: they have to sweat until they drop, and their salaries are lower than those of their colleagues working on sites equipped with modern technology. Also of concern is the fact that, despite the chronic shortage of technology, in nowhere near all situations is efficient use made of it, it lies idle. In order to cut off job orders for laborers in a more profitable fashion, the construction workers perform manually that portion of the operations designated to be done by machine. There are frequent instances of crash work, rush work, work on days off and work on holidays on the town's construction sites. People then receive higher salaries, but much money for overtime pay is lost. This has a negative impact on the production cost of construction and the profits of the sector. It is therefore essential to fill up construction organizations with powerful and highly-productive technology, and to strive for maximum use of same. This is what guarantees an increase in labor productivity and manpower development in construction work.

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LABOR

LITERATURE ON COLLECTIVE LABOR BRIGADE SYSTEMS SUMMARIZED

Moscow EKONOMICHESKAYA GAZETA in Russian No 36, Sep 85 p 14

[Article by A. Zubkova: "For Specialists in Brigade Organization of Labor"]

[Text] The analysis of brigade forms of labor organization and the resolution of a number of procedural and organizational problems of their future improvement have been the subject of considerable discussion in Soviet literature on economics.

Readers' interest was aroused by the book "Proizvodstvennyye brigady na predpriyatiyakh mashinostroyeniya" ["Production Brigades in Machine Building Enterprises"] (Leningrad: Mashinostroyeniye, 1984), edited by N. A. Lobanov. Reviewed in the book is a large complex of problems relative to organization and control of production brigades, analysis and determination of salaries and provision of economic incentives for brigades on the basis of cost accountable activity. Of special interest is a discussion of the socio-economic factors involved in the development of the primary labor collective. Unfortunately, in the available literature on brigade forms of labor organization this problem is treated poorly.

The theoretical and procedural formulations advanced by the authors relative to future effective expansion of brigade forms of labor organization merit the reader's interest. The experience accumulated by Leningrad enterprises in their implementation of collective forms of labor is presented well.

In the book "Trudovoy kollektiv i distsiplina" ["The Labor Collective and Discipline"] by A. I. Rogov (Moscow: Ekonomika, 1984), it is pointed out that maximum effectiveness of measures related to strengthening of work discipline is obtained in the primary link of the labor collective - the production brigade. Thus, as a result of introducing the brigade form of labor organization in the Krasnoyarsk plant Sibtyazhmash, there were 17 percent fewer violations of labor discipline. Most progress is made in brigades which include their own party groups. In the Kaluga Turbine Plant production association, for example, there are more than 200 of these brigades. In those cases where party groups cannot be set up, party organizers do the job well.

Happily, branch publishing offices have also taken up this topic. For example, we are given information on the effectiveness of brigade forms of labor

organization in the booklet "Effekt kompleksnoy brigady" ["Effect of the Integrated Brigade"], by S. I. Dzaksybayev and I. G. Antonenks (Moscow: Nedra, 1984). This is a discussion of the advanced work experience gained by a brigade led by A. A. Shishlov, bearer of the decoration "Miner's Glory", third class, working in open pit Bogatyr of the Bogatyr of the Ekibastuzugol production association.

The above-mentioned specific discussions relating to the experience of changing to the brigade form of work organization are extremely useful. In our opinion, there is a lack of urgency in this work on the part of publishing offices Metallurgiya, Sudostroyeniye, Rosselkhozizdat and others. The need for literature which explains and generalizes the more progressive forms of collective organization of work including the conditions peculiar to the particular branch involved is very great. It is obvious that all branch publishing offices must become more concerned with publishing literature in the jointly published series "Shagi brigadnogo podryada" ["steps of the Brigade Contract"].

In addition, examination of the recently published books reveals that most of them are essentially descriptive. In essence, the authors afford too shallow a treatment of important problems, such as development of cost accounting relative to collective forms of work organization, implementation of contract principles of work organization at the sector, shop and enterprise level and questions of legal regulation of brigade work.

The above-mentioned shortcomings are also found in certain generally useful new books. As an example, take the book "Brigadnyy podryad na avtotransporte v stroitelstve" ["The Brigade Contract Applied to Automotive Transportation in Construction"], by D. G. Shimko, M. N. Vaysman and M. I. Radomzelskiy (Budivelnik, Kiev). This is an account of work experience gained by drivers of the Vinnitsa Motor Vehicle Base, UkSSR Minpromstroy, which was converted entirely to brigade accounting and the brigade contract system. However, an in-depth economic analysis of effectiveness of the progressive form of compensation is not presented.

In general, in the recently published literature the treatment of organizational and procedural problems of implementing brigade accounting and the brigade contract is superficial. These very problems are of special interest to readers now, when there is discussion of the problem of wide adoption of the cost accountable brigade and brigade contract concept and, in rural areas, of organization of cost accountable compulsory training.

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EDUCATION

SOVIETS INTRODUCE COMPREHENSIVE COMPUTER TRAINING

Education Official Interviewed

Moscow IZVESTIYA in Russian 30 Aug p 3

[Interview with Fedor Grigor'yevich Panachin, first deputy of the USSR Ministry of Education, by K. Levitin: "The Computer Lesson Begins"; date and place not specified]

[Text] Several days will elapse, and the first students will open the first textbook on the new subject, "Fundamentals of Information Science and Computer Engineering", and, just as long ago they learned to read their ABC's, they will begin to master the elements of computer literacy of the twentieth century.

Naturally, as in any kind of new subject, there are still quite a few problems and difficulties here. In connection with this, the editorial staff turned to Fedor Grigor'yevich Panachin, first deputy of the USSR Ministry of Education, with a request to answer questions of interest to our readers.

[Question] Fedor Grigor'yevich, now an information course will finally arrive at the school....

[Answer] By the way, our country is a pioneer in teaching students programming. The first successful experiment in this field was conducted as early as the end of the 1950's at School no. 444 in Moscow under the direction of S. I. Shvartsburd, now a member-correspondent of the USSR Academy of Pedagogical Sciences. From the middle of the 1960's, the elective courses of the fundamentals of programming and computer engineering became a common occurrence in general education schools in the whole country. Thousands of students have taken them. Many of them today comprise the nucleus of a multiple team of highly-qualified specialists working on the development and use of computer engineering in the national economy of the country.

[Question] To what degree does the new course affect the teaching of other subjects: is it not necessary to "cut down" on a number of its other disciplines?

[Answer] A new discipline, undoubtedly, has its own specific character, but at the same time possesses a large number of interdisciplinary connections, as we shall mention. In a study of the fundamentals of information science, important components of thought are formulated--so-called algorithmic thought, the ability to plan its activity consciously, to construct a model of phenomena which students encounter. The teachers-experimenters observe that teaching programming develops the logical abilities of students, forms in them the realized relationship for control and self-control, provides them with work experiences which are characteristic of many forms of activity. It can be said that the study of this subject to a considerable degree promotes the organization of the total cultivation of thought in school children. Therefore, we expect that introduction of the course "Fundamentals of Information Science and Computer Engineering" will have a positive effect on the mastering of other disciplines, both of the natural science and the humanities courses.

Experiments conducted in Novosibirsk showed, for example, that correctly organized practical studies of information science promoted deeper study of other subjects. Thus, students who devised a reference system on the history of the USSR not only mastered the techniques of constructing programming systems but also more fully mastered the factual material, and this sharply increased their interest in this subject.

Thus, the introduction of a course in information science and the use of the computer in the educational process positively affects the quality of instruction, and, therefore, it is scarcely worth worrying about the negligible curtailment of other disciplines.

[Question] The USSR Academy of Pedagogical Sciences built a special research institute for school information science and computer engineering in Novosibirsk. What are its tasks?

[Answer] The development of the scientific bases of information science and computer engineering instruction in secondary school institutions and preparation of teaching methods and programming and mathematical material for wide adoption of computer engineering in the educational process will become the main direction of activity of the institute. In addition, the institute will be the main organization for the development of practical programs for computers which are going to be used in the school. Its staff members will develop a method for using computer engineering for the study of different subjects of the general course and propose forms for the use of computers for work outside of class.

The USSR Academy of Pedagogical Sciences has built a special computer engineering laboratory. Their staff members participated in the preparation of instructional materials for the new course, worked on facilities for a model computer engineering center, and started the preparation of special instructional programs for computers. However, all this has only begun. Ahead is a large amount of work on the accumulation and correlation of experience in teaching a new course and its improvement.

[Question] Many journals are published in the world which encompass the subject of computers in life and studies, designed for the widest reader, including the

student. In particular, such a journal is published in Bulgaria; it is called KOMPYUTER DLYA VAS ("Computer for You"). Does the USSR plan to issue such publications?

[Answer] In our country a number of journals designed for different categories of readers: NAUKA I ZHIZN' ("Science and Life"), KVANT ("Quantum"), RADIO ("Radio"), MATEMATIKA V SHKOLE ("Mathematics in the School") and others are published, as well as separate materials on these problems and a series of papers on the subject of different aspects of the use of computers. Thus, it is hardly necessary to found still another popular journal. A different matter is publication of a special scientific-pedagogical journal in which numerous problems would be found which are related to the mastering by young people by practicing the use of computer techniques and by its use in the instructional process. The publication of such a journal under the title INFORMATIKA I VYCHISLITEL'NAYA TEKHNIKA V OBRAZOVANII ("Information Science and Computer Engineering in Education") is planned to begin in the very near future.

[Question] In the same Bulgaria, a school textbook has been published based on contact with a computer for the youngest school children, on which the best artists, poets, book designers and journalists of the country worked. As the result, it turned out to be an exciting, enjoyable, elegant, colorful and favorite publication for children. What are we doing in this direction? What will school textbooks have on information science?

[Answer] The first part of a trial instructional guide for the course "Fundamentals of Information Science and Computer Engineering" for students in the ninth class has now been brought out and the second part is ready to be printed--for tenth class students. The many years of experience of research conducted at the Computer Center of the Siberian Department of the USSR Academy of Sciences, and also the methodical treatment of the Scientific Research Institute of the content and methods of instruction of the USSR Academy of Pedagogical Sciences were used in its preparation. An instructional kit including also a teachers' manual, a book for reading addressed to students and other manuals, which was prepared by the USSR Academy of Pedagogical Sciences, is approved by the staff of the USSR Ministry of Education. Their part is now published. However, this is only the first step. A standard textbook for the new course will appear in the school in a very few years. In it, it is proposed to conduct a competition in the following year.

[Question] It is apparent that one of the central problems is to instruct teachers. What steps have been undertaken in this direction?

[Answer] Preparations were organized in the whole country this summer for summer courses for teachers of general education schools and for teachers at trade schools and technical colleges. About 70,000 secondary school teachers began to learn. Experienced university lecturers, who were especially prepared for this at Moscow State University, gave them lessons.

And beginning in the year 1985/86 in many teaching colleges of the country, the training of teachers of mathematics and physics for a second specialty--information science and computer engineering, is beginning. In addition, part of the

more advanced students of the physics and mathematics faculties of the teachers colleges will rapidly prepare to teach this subject. In the new educational plans of the pedagogical institutes and schools for students of all specialties, the study of a course, "Technical Methods for Teaching Computer Engineering" is provided.

[Question] The material basis for teaching information science is not less important. To what computers is the Ministry of Education inclined? When and in what quantities will the schools obtain them? Who will service and repair this equipment?

[Answer] Computer engineering will become such a basis, which our industry will produce. Beginning with the second quarter of 1985, Agat and DVK [expansion unknown] microcomputers have already begun to arrive in schools. In this way, the first laboratories of information science will be equipped in the schools and institutes for improvement of teachers and in teachers' colleges as early as this year. During the next Five-Year Plan, industry will supply us with thousands more improved computers for computer engineering laboratories in schools and interschool educational-industrial training centers in all regions of the country. The USSR Central Statistical Administration is charged with repair of these computers, where a special subdivision has already been organized, and there is a network of specialized enterprises. Teachers of information science, who are given a bonus for this work, currently service computer equipment in schools.

[Question] And finally, a question on a personal plane. How are your relationships with the world of computers turning out?

[Answer] I have a humanities, historical-pedagogical education, and previously I did not have to deal directly with computer engineering. But today computer literacy is becoming a mandatory component part of total education, and therefore with the new school year I, together with teachers and students, shall begin to become familiar with the ABC's of information science and computer engineering. By the way, I need it also for daily work: we shall use computers more and more widely in management by education.

New Courses Developed

Moscow TRUD in Russian 30 Aug p 4

[Interview of Nelli Akimovna Yermolayeva and V. Vol'nova of the USSR Ministry of Education and N. Yegorov of the USSR Ministry of Higher and Specialized Education by TRUD correspondent S. Mazurenko: "The Agat Computer, A Lesson in Information Science--Students Are Going To Be Introduced to the New Device and Subject" in the column "What the School Year Prepares for Us"; date and place of interview not given]

[Text] On September 1, Knowledge Day, millions of pupils, students and school children of the PTU [expansion unknown] and technical schools will fill auditoriums, classes and laboratories. What new things await them in the current school year! TRUD correspondent S. Mazurenko turned his

attention to the responsible officials of the USSR Ministry of Education and of the USSR Ministry of Higher and Specialized Education with such questions.

[Answer by Nelli Akimovna Yermolayeva, deputy chief of the Main Administration of the USSR Ministry of Education to implied question] We shall begin with the fact that in many large cities in several republics--for example, in Moscow, Leningrad, Azerbaijan and Armenia--the six-year old cohort entering the first class has become larger. All schools of the country will convert to this form of education before 1990. For this, it is necessary to develop new instructional programs, to prepare teachers and organize additional extended day groups. Already in Georgia this year, all schools have thrown open their doors to six year olds.

But this is not a unique innovation. In particular, the ninth class members will begin to study new subjects, "The Fundamentals of Information Science and Computer Engineering and "The Ethics and Psychology of Family Life".

[Question] Nelli Akimovna, the quality of teaching of new subjects will depend on the presence of modern equipment and good instructional aids. How are these problems being resolved?

[Answer] Schools, and also institutes for improving teachers are provided with computer equipment--with Agat and DKK-2 personal educational computers. Inasmuch as industry up to now has not been in a position to provide all schools with an adequate amount of computer equipment, the school program provides machine and nonmachine variations of teaching the fundamentals of information science. And where, indeed, will the children become acquainted with computers? Practically every city has enterprises equipped with modern computers. School children will go there on excursions, and experienced programmers in practice will help them master work on computers.

And artistic and journalistic productions will become teaching aids for the course "The Ethics and Psychology of Family Life". We shall mention that the book by T. Afanas'yeva, which also serves as a unique textbook, is now being republished.

[Question] The school is a second home for our children. What is being done to improve school life?

[Answer by the school inspector of the Main Inspection of National Education of the USSR Ministry of Education N. Vol'nova] A considerable intellectual and physical load falls on today's pupil. According to the new program, for example, the older classes have more instructional hours which have eliminated labor education. And the six-year olds also require care....Therefore, special attention will be paid to school dining halls. The Nutrition Institute of the USSR Academy of Medical Sciences developed new school menus which take into account the age requirements. Juices, jams, vegetables and meat dishes have been widely introduced in them.

What will today's student become? This depends a great deal on his teachers. Many tenth class students are thinking of becoming teachers and will continue studies in higher training institutions.

[Question] What new things can the Ministry of Higher and Secondary Specialized Education offer them? We posed this question to the deputy of the USSR Ministry of Higher and Secondary Specialized Education N. Yegorov.

[Answer] New departments have been established in the physics and mathematics faculties of the teachers institutes of the country which will prepare teachers of information science and computer engineering for secondary general education schools. New instructional plans are being introduced in teachers colleges and universities preparing teachers. Students will study the fundamentals of modern production and methods of polytechnical and labor education.

Practical Methodology Described

Moscow PRAVDA in Russian 29 Aug 85 p 3

[Article by V. Frolov, candidate of technical sciences, Moscow: "To the Computer, Teachers! School Reform is a Universal Matter"]

[Text] Moscow schoolteachers stretched their numb legs on the Leninsk Mountains. For some time, they themselves have become diligent students. On 1 September, they have to begin studying a new academic discipline: "The fundamentals of information science and computer engineering".

It is very important, in order for those who will stand at the helm of factories, industrial plants and large-scale agroindustrial associations by the year 2000, to establish space settlements of "earthlings" in the vast spaciousness of the Universe, that they should know, understand and intelligently use computer engineering. Neglect by certain leaders of the noticeably changing "technological climate" and even elementary computer literacy, puts them in the position of Fonvizin's Mitrofanuska, who, as is well known, refused to study geography, saying, "There are coachmen for that sort of thing."

...Opening courses for Moscow schoolteachers, Member-Correspondent of the USSR Academy of Sciences N. Bakhvalov, a well-known scientist and chief of the Computer Mathematics Department of Moscow University, said:

"We shall teach you programming, but not so that designing programs becomes the life goal of your students. Something else is important: for each of them to understand clearly, where and how to use their intellectual potential, multiplied by the resources of the computer, exactly with optimal efficiency. The time is not at all far away when small "thinking" machines will be placed at each work place and will permanently enter our life.

Lecturer A. Kushnirenko came to Moscow State University after working at the Computer Center of the USSR Academy of Sciences. He is not a novice in school

problems either; for several years he took a programming course sponsored by the school, with which he still is connected by strong bonds. The lectures of Kushnirenko for teachers are like elegantly composed programs of "microtests" and the "standard conversion command". Now they like to formulate instructional lessons as the analysis of some "problem situations". Kushnirenko breaks down series of such microsituations--to the audience which does not become bored here and successfully reacts to sometimes unexpected questions ("Tell me, how many kilobytes do you take out of your mailbox in the mornings?"). Contact with the audience is achieved in this way.

"We prepared a special practicum in computer engineering for teachers," says A. Kushnirenko. "Let us go to our display class."

Anatoliy Georgiyevich fingered the computer keyboard with the hand of a virtuoso pianist, and the key words lit up on the display screen: "Algorithm", "Argument", "Result", together with the appearance of a "fence" of exclamation marks.

"Here it is, our Ye-Practicum". We call it this from the first [Russian] letter of the first surname in the author index of the new school textbook of information science and computer engineering."

The experimental textbook was published under the editorship of Academician A. Yershov, the originator of computer instruction of students in the Siberian Department of the USSR Academy of Sciences. Appearing at an international symposium, he said, "If the development and dissemination of printed books led to universal literacy, then the development and dissemination of the computer will lead to universal programming... Now, after the appearance of microprocessors, the question as to whether there will be or not be computers in the school already becomes academic. Computers are already in the schools and will appear there in increasing quantities, and very active intellectual and organizational work is required from us in order to give this process a controllable and pedagogically motivated character."

The first practicum in our country on the new school program originated within the walls of the mechanical-mathematical department of Moscow State University in the computer methods laboratory headed by the lecturer, Candidate of Physical Sciences A. Mikhalev. G. Lebedev and D. Varsonaf'yev can be called the "fathers" of the Ye-Practicum in addition to Kushnirenko. While the manuscript of the new textbook was only on the way to the printer, laboratory staff members, having developed enviable efficiency, made a Xerox copy of a draft text of all the practice problems and in a record short time solved them on the faculty computer.

An interesting feature: the whole practicum is composed in the form of a dialog with the computer, whereupon it "converses" in Russian, showing exceptional delicacy to the novice. Short word-phrases brightened by the warmth of human benevolence, are lighted up on the screen. For example:

"In a minute..." (and not "Wait for a response", which we have never heard out of a telephone receiver). If, however, the novice makes a mistake in

something (it is impossible to expect much from students!), the computer produces the prompting; "Irregular string" or "Bad index", whereupon the pulsating shining cursor automatically "sticks" to the zero position of the screen line.

"Naturally, we could not have fit into such tight time periods," explains Anatoliy Georgiyevich, "If this kind of computer undertaking was lacking in our department. We already had made some attempt at development of not these, but similar systems like "Alpha, Beta, and Gamma Practicums". We repeatedly approved them for our students. These practicums are a kind of "support" of the beginning university programming course. Only visualization of the process of use was devised in the course in the "Ye-Practicum" and was different from the project solutions of the earlier practicums.

Anatoliy Grigoriyevich pushes the keyboard and on the screen "animated films" begin "to roll"--the computer scrupulously solves the problems of the new textbook. On the display, not only do the answers light up, but also the very process of the solution of the tasks and exercises specified by the program--"The Largest Common Denominator", "Vibration", "Heat Transfer"--and even games...

"Anatoliy Grigoriyevich, but how does your child look at the background of similar patterns of computer instruction, so to speak, taking world standards into consideration?"

"We consider that the work in the "Ye-Practicum" in productivity and user-friendliness in arrangement exceeds the instruction in the standard operational system of a foreign sample.

"In arrangement"--this by a factor of ten."

"Isn't this estimate too high?"

"Not at all. After four hours of instructional practice with the keyboard and the procedure, the novice already becomes competent to solve not only all 30 exercises of the textbook but also solve problems, so to speak, 'according to the motifs of the textbook'".

"You said 'novice'. In other words, the person being taught is not assumed to have special knowledge, say, of systems of calculation or of the inner workings of a computer?"

"Our experience showed that the "Ye-Practicum" is a very useful instrument for studying the basic concepts of information science and computer engineering. In the process of working with it, the person being taught spends his basic efforts on the composition of fundamental, even though simple, algorithms and the correction of logical errors. At this step of instruction we free the novice from solving problems of structural programming or from attempts to understand what exactly a written program does, 'there, inside'."

In the opinion of associates of the mechanical engineering and mathematics department, such a productive and "user-friendly" condition must be established

also in the education of professional programmers. Development of a special instructional-professional means of programming is being conducted at the department from this point of view under the name "SIMPLEKS". And in the future, in the opinion of Academician Ye. Velikhov, vice-president of the USSR Academy of Sciences, the learner sitting at the computer console will have to know only how to press the "Help" key, and the computer will teach him all the rest in a system of dialog.

The first preparatory steps have been taken toward the implementation of a computer instructional program. It goes far beyond the scope of secondary and even higher education. It is an all-nation program of radical acceleration of the tempos of scientific and technical progress designed for many years in the future,

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EDUCATION

ACADEMICIAN DEFINES COMPUTER APPLICATION IN SCHOOLS

Tallin MOLODEZH ESTONII 17 Sep 85 p 2

[Interview with Academician V. G. Razumovskiy by V. Chebotarev: "The Computer Goes To School"; date and place not specified]

[Text] The introduction of a new subject at school is a rare event. Interest in it is natural, as are the many questions connected with this interest. Academician Vasilii Grigoryevich Razumovskiy, secretary of the Didactics and Individual Methods Division of the USSR Academy of Pedagogical Sciences, professor, Doctor of Pedagogical Sciences and chief editor of the journal FIZIKA V SHKOLE, and head of the comprehensive research program "The Computer in the School," answers these questions.

[Question] In March 1985 the CPSU Central Committee Politburo designated measures to guarantee computer literacy in secondary school pupils and to introduce computer technology widely into the educational process. What is intended to be done in the first place?

[Answer] The short-term prospects have been determined: this school year a new general subject, "Fundamentals of Informatics and Computer Technology," has been introduced in secondary school. It will be studied in the ninth and tenth grades.

The next step will be adoption of micro-computers as a teaching tool and, finally, as individual training machines for pupils.

[Question] What experience has been accumulated already in our country in basic programming training in the schools?

[Answer] The Soviet school has to its credit more than 20 years, experience in teaching pupils programming basics and computer work. This work is conducted in specialized schools, in optional classes and inter-school industrial training centers. We have the experience of using the computer also as a teaching aide. In Novosibirsk academic city in school No. 166, under the leadership of Academician A.P. Yershov, a teaching system, Shkolnitsa, [schoolgirls], was created on the basis of the Agat personal computer. The special training languages "Robik:" and "Rapira" are being used in this system, as well as a package of applied training programs. Experience in teaching informatics has been accumulated on the basis of this

system in the fifth and sixth grades. For 10 years now a summer school for young programmers has been operating in the Siberian Department of the USSR Academy of Sciences. The Nastavnik system, which was developed under the leadership of the USSR Academy of Pedagogical Sciences Academician Ye.N. Sokolov, is being used to teach the pupils of School No. 710 at Moscow State University (MGU) imeni M.V. Lomonosov.

Classes in informatics and computer technology are being conducted for many schools on the basis of demonstration classes of base enterprises and industrial training centers.

[Question] This school year ninth-graders' bookbags contain a new textbook called "Trial Teaching Aid." What does this mean?

[Answer] The authors and the Prosveshcheniye Publishing House spent several months creating the teaching aid in the new subject.

In 1986 a competition will be conducted to write the textbook for this subject. It is proposed that at this time the schools' experience be evaluated and also that an experimental testing and thorough approval of the manuscript of the new book will be conducted. On the basis of the results of this work the pupils' book will gain the status of a standard textbook.

[Question] The educational process is a complicated concept. The teaching aids, the method of teaching and the technical equipment of schools--are enough of these conditions met to adopt a new subject?

[Answer] Of course not. We have to equip ourselves with the proper methodology. For this we must present precisely the prospects for the scientific-technical revolution, find ways to perfect computer technology and understand its place in the context of general human culture. Many problems must be considered: the age-related characteristics of the pupils, the regularity of development of their creative imagination and general intellectual development. We still have to elaborate the optimal regime of computer activities for students and that means that we must conduct ergonomic and physiological-hygienic research.

[Question] Won't the new subject "overload" the already saturated school program?

[Answer] That's not an idle question. There are 20 subjects in our school study plan. For the new one it will be necessary to "crowd" the teaching time budget for other subjects. Nevertheless, informatics and computer technology have an important enough for accelerating the scientific-technical revolution that it is urgently necessary to introduce the new educational subject.

[Question] Probably the first to use the computer in the classroom will not be the pupil, but the teacher: the mathematician, the physicist. Does he know what he will be teaching?

[Answer] Enough mathematics and physics teachers have improved their skills so that they are qualified to teach classes this year.

In many pedagogical higher educational institutions in our country teachers training in the new discipline has begun. Finally, all teachers, regardless of their specialties, will get the necessary knowledge for use of micro-computers in the educational process.

[Question] Contemporary computer technology: it is a high-cost thing, many schools can't afford it. . .

[Answer] The state has set aside great resources to equip schools. The technical equipment of schools will occur in several ways: through public education departments and patron [enterprises] which have computer technology at their disposal and which will create inter-school industrial training centers to serve as a basis for the schools of their areas. This process is slated not only for one year, but for the entire subsequent five-year plan.

[Question] You were speaking of the second aspect of adopting computers: for teaching. What advantages does this promise? And also--won't the teaching machine replace the teacher?

[Answer] The value of the computer as a teaching machine is in the individualization of training. The training curriculum in principle can be as flexible as desired and, consequently, can in great measure meet the personal needs of the pupil: his or her level of preparation, quickness, speed of reactions, and so forth. Also, the machine is "iron": it will not become tired and get angry over "bad" answers and "ridiculous" questions; and it is a marvelous teacher, beneficial for the limitless polishing of pupils' ability and skills.

Nevertheless, I think the computer will never fully replace the teacher. The authority of the respected teacher teaches and cultivated. The computer will not replace the charming personality of the beloved teacher (luckily!).

[Question] In a few years all the schools' final-year students will have a mastery of the fundamentals of programming and be able to work with computers. Does this mean that all of them will definitely be working with computer technology?

[Answer] It means that all of them will have an idea of where they can use computers. They will be capable also of using computers in everyday life and in production. Also, each can increase the level of his or her qualifications as needed depending on specific conditions.

[Question] What foreign experience has been used to develop the curriculum and textbook?

[Answer] The experience of socialist countries and also developed capitalist countries was analyzed. However, it should be noted that the USSR is the first country in the world where such a subject has been introduced in secondary education with the necessary quality. Therefore, in large measure the problem you've brought up should be solved completely independently.

EDUCATION

DEPUTY MINISTER PANACHIN ON EDUCATION'S FUTURE TASKS

Moscow UCHITELSKAYA GAZETA in Russian 22 Aug 85 pp 1-2

[Article by F. Panachin, first deputy minister of education of the USSR: "Entering the Second Year." For earlier Panachin interview see JPRS-UHR-85-015, 6 August 1985, pp 109-114]

[Text] The tasks of education workers in the forthcoming school year were outlined clearly and demandingly in the decree of the CPSU Central Committee, "On Party Leadership of Work for Implementing the Reform of the General Educational and Vocational School in Gorkiy Oblast." All units of the education system, from the school and rayon divisions to the ministry, should analyze what was done in the first year of the reform and take additional measures. The Ministry of Education is obliged to show greater persistence in improving the style and methods of its activity and, in conjunction with party and soviet agencies, make sure that all public education workers have a deep awareness of the need for a radical restructuring of the training and educational process, the elimination of routine and perfunctory work, and the struggle against percentage mania and other negative phenomena, and they must make sure that everyone is prepared for working in the new way.

The most important peculiarity of the new school year is that it is taking place under the conditions of the political and labor enthusiasm of the Soviet people which was brought about by the preparation for the 27th Party Congress, the decisions of the April (1985) Plenum of the CPSU Central Committee, and the statements from the conference in the party Central Committee concerning acceleration of scientific and technical progress. All this will undoubtedly be at the center of attention of Soviet teachers and will have a positive effect on the work of the general educational school.

How specifically are the teachers in the school prepared for the school year? What is the scientific-methodological and organizational support for the training and educational process? First of all one must say that the schools are receiving new programs for all subjects. They have been developed taking into account the requirements of the school reform, socioeconomic and scientific-technical progress and the accumulated experience, and also taking into account the new training plan for the 11-year secondary school. In them the polytechnical orientation and the link between the fundamentals of science and production are considerably stronger. Excessively complicated and

secondary material has been removed, and duplication has been eliminated. Special attention was devoted to problems of forming a scientific world view in the students and increasing the educational direction of training.

The programs have a unified structure. The main part presents the thematic content of the training course with a sample distribution of the hours for the various subjects (sections), it gives a list of the main concepts and leading ideas, and it presents requirements for organizing the training and educational process for each subject and the methods for conducting the classes. The requirements for the knowledge and ability of the students have been formulated for each class. The programs end with a description of the norms for evaluation.

All the programs have been considered beforehand by the broad scientific and pedagogical community.

As we know, in the ninth grade they begin to study the subject "Fundamentals of Information Theory and Computer Equipment." A large amount of work has been done for organizational-pedagogical, personnel and didactic support here. A program and textbook have been published. Teachers of mathematics and physics have gone through a short course of retraining. With the help of base enterprises and patronage organizations, specialized offices are created which are equipped with computer equipment. But only the first steps have been taken. It will be necessary to arrange the production and delivery of computers to the schools and training-production combines, to create an institute for information theory within the framework of the USSR Academy of Pedagogical Sciences, and to organize the development and reproduction of packages of computer programs.

In the new school year it is very important to gradually introduce general teacher training in computer equipment. In the near future it will occupy a significant place in teaching the absolute majority of school subjects. Universities, pedagogical VUZes and many institutes for improving teachers should have their say here.

In the 1985/86 school year in dozens of classes they will continue to study the ethics and psychology of family life, which was begun a year earlier in the 9th grades.

By the beginning of classes we had published many school textbooks which were either new or modernized. A total of more 196 million copies were published. The main firm producing textbooks and training aid, the Prosveshcheniya Publishing House--filled the ministry's plan-order ahead of schedule: by 1 July. We are grateful to the collectives of publishers and printers who have worked well in order to provide the schools with its main "spiritual weapon"--textbooks. The main thing here is that the new textbooks have augmented the library holdings and have been issued on time to their anxious and irrepressible users--the school children. Incidentally, the school libraries are growing from year to year and now include up to 7 million textbooks.

The quality of training literature, the way it is printed and its artistic form are gradually improving. About 1,200 titles of textbooks, or 70 percent

of the overall number of them, have already been changed over to the improved offset method of printing.

The USSR Ministry of Education has developed a long-range plan for the publication of new and the improvement of currently existing textbooks in the forthcoming 5-year period. Competitions will be continued for a number of school textbooks.

A great deal will have to be done in the organization of the training of 6-year-old children. The absolute majority of the current "preparatory classes" in schools and "preparatory groups" in kindergartens during the 1986-87 school year will become ordinary first grades of the 11-year secondary school. Therefore it will be necessary to perfect the work for preparing textbooks and visual training aids, to develop more extensively the training and retraining of teachers in the primary grades, and strengthen the material base of the schools.

What is new in pedagogical support for the training and educational process?

The introduction of new training courses--ethics and the psychological of family life, the fundamentals of information theory and computer equipment--has brought about partial changes in the training plan for the 1985/86 school year. Because of this the ministry has given additional recommendations for studying the aforementioned disciplines, and also literature, mathematics and economic geography.

For purposes of increasing the responsibility of the students, strengthening training, labor and social discipline, and developing collectivism, initiative and independence, beginning with the 1985/86 school year a new system will be introduced for evaluating the school children for behavior, diligence in study and socially useful labor. And the marks ("exemplary," "good," "satisfactory" and "unsatisfactory") will be given individually.

A leading criterion for evaluating behavior is following the "rules for students." The ministry has established new standard rules individually for students of all three levels: first-fourth, fifth-ninth and ninth-11th grades. The evaluation of their diligence will reflect the measure of responsibility of each student for training and labor, the degree of conscientiousness, effort, zeal and efficiency. Of course the marks for behavior and diligence might not coincide. They are calculated from the results of the school quarters (in the 10th-11th grades for the semesters) and the school year, and they are entered into the class journal, daily logs and graduation documents, and the parents are also notified of them.

Beginning with the new school year tests will be introduced for physical culture for the boys and girls in the 8th and 10th grades. This will increase the responsibility of the students for carrying out the comprehensive program for physical fitness.

As is envisioned by the party and government decree concerning the school, a "certificate of excellence" is being introduced for incomplete secondary education.

The USSR Ministry of Education has approved training plans for evening and correspondence schools and, in conjunction with the Komsomol Central Committee, methodological recommendations concerning forms for the completion of a general secondary education by working youth. And it was especially pointed out that the most convenient educational forms and conditions for studying are determined by the pedagogical collective in conjunction with the labor collectives and the Komsomol organizations.

The board of the ministry has also approved a number of training plans for schools with in-depth (faculty) study when students of the 8th-11th grades select individual subjects of physics-mathematics, chemistry-biology and social science-humanitarian cycles.

On which essential problems should public education agencies concentrate their efforts in the near future?

First, on providing the schools with the program-methodological literature that is in short supply. Unfortunately, we are not seeing here the proper efficiency on the part of the Scientific Research Institute of Labor Education of the USSR Academy of Pedagogical Sciences or the Book Publishers.

Second, on the organizational work for strengthening the material base of labor and occupational training directly in the schools; the creation of new and the equipping of existing training and production offices (by the end of 1986 there will be more than 3,000 of them in the country); the organization of work positions for schoolchildren in the shops of the base enterprises, kolkhozes and sovkhozes. In order to improve polytechnical education, it would be expedient to create (where possible) offices and laboratories for machine operation, electrical equipment, economics and organization of production.

Third, the realization of the new documents which regulate labor and vocational training and students--the provisions concerning the base enterprise, the interschool training-production combine; concerning the student production brigade on the kolkhoz and sovkhoz; and concerning the organization of socially useful, productive labor on the part of the students.

Finally, taking into account the fact that vocational experimental centers are being created extremely slowly and the system of the USSR State Committee for Labor and Social Problems has not yet developed the necessary vocational orientation work, public education agencies, beginning with the USSR Ministry of Education, must step up the activity of the councils for vocational orientation, and also the corresponding offices in the schools and the training-production combines.

In the new school year more than 200,000 specialists will come to the schools and other training-educational institutions, including 115,500 with a higher education and 85,300 with a secondary specialized education. To receive them, get them settled, provide the teaching load, organize the year's probation, for which it is necessary to select experienced educator-mentors--all this is

the direct responsibility of the leaders of the schools and education agencies.

The ministry has approved new provisions concerning the policy for certifying teachers, educators, and senior Pioneer leaders of the schools, boarding schools and children's homes of all types, and educators of children's preschool institutions. Thus the range of educators undergoing certification has been considerably expanded. We regard certification as one of the means of increasing the authority, prestige and the results of the labor of pedagogical workers.

Briefly describing the work with personnel, let us note that we are now developing the basic directions for restructuring higher and secondary specialized education and the system for increasing the qualifications of personnel. The main point of the preparatory documents amounts to increasing the participation of VUZes and tekhnikums in the intensification of the national economy. The restructuring of the higher and secondary specialized school presupposes improvement of the content of education and updating of the entire system of training and education of specialists: expansion of laboratory and practical studies, increased independent work on the part of the students and thorough mastery of computer equipment. The increased qualifications of the personnel will have to be accompanied by technical restructuring of the national economy and be oriented toward the economic effect. Measures are being earmarked for improving the system and practice of planning the training of specialists and strengthening and expanding the ties with VUZ, academic and branch sciences.

Our schools will receive thousands of new buildings. In 1985 it is intended to reduce newly constructed schools to accommodate 817,000 students. In the majority of republics, krays and oblasts this plan has been fulfilled, for which we are hardly grateful to the party and Soviet agencies and labor collectives of builders.

A new policy has been introduced for calculating the staffs and the wages of teachers of grades I-IV in understaffed schools. More than 5 million additional rubles have been allotted to finance this measure.

Beginning on 1 September 1985 there will be a new stage in increasing the wages of teachers and other public education workers--teachers of middle and senior classes, instructors and masters of production training, and managers and other pedagogical workers of schools, tekhnikums, specialized vocational and technical schools, and interschool training production offices in the regions of the Far North, in the European North (Murmansk and Arkhangelsk oblasts, the Karelian ASSR and the Komy ASSR), Siberia, the Far East, the Ural economic region, and also the Mary and Chuvash ASSR's, and Vologda, Kirov, Novgorod and Pskov oblasts. Additional state expenditures on increasing the wages of teachers in 1984 amounted to 374 million rubles, and in 1985 they are estimated to be 850 million rubles.

In keeping with the documents for the reform of the school, in 1986 the USSR Ministry of Education and the USSR Ministry of Finance will solve such problems as introducing the position of organizer of out-of-class and out-of-

school work in all secondary schools; additional payments for the organization of labor education and socially useful labor; reduction of the crowding in the first grades and educational groups of boarding schools and children's homes, and so forth.

There is one more concrete peculiarity of the 1985/86 school year. It will go through the stage of the completion of the 11th Five-Year Plan and the beginning of the 12th. Therefore it is very important to successfully fulfill all indicators of the national economic plan of the final year of the 11th Five-Year Plan and worthily greet the 27th Party Congress.

But what are these indicators?

Including 58 percent of the children (68 percent in the cities and about 40 percent in the countries) in preschool education.

Training 40.8 million students in day general educational schools, including 16.5 million in rural locations.

Admitting to the ninth grades of schools 57.6 percent of the students who graduated from the eighth grades, continuing the training in all types of training institutions of 99 percent of those who have gone through incomplete secondary schools (in the cities--54.9 percent of the graduating class, in rural areas--63.4 percent). Including 13.3 million people in extended day schools and groups, which will amount to 36.8 percent of the overall number of students in grades 1-8 (55 percent in grades 1-3 and 24 percent in grades 4-8).

Admitting 816,000 students to ninth grades of evening schools (as compared to 1,072,000 in 1984).

There is a wide range of problems which our teachers will have to solve in the new school year. Among them we must especially single out the education of children and youth in the spirit of patriotism and internationalism, using historical materials.

The years 1985-1987 are the years of the 80th anniversary of the first bourgeois democratic people's revolution in Russia, the 70th anniversary of the second revolution, which crushed the autocratic system, and the Great October Socialist Revolution which laid the basis for our social and state structure. Study of the historical experience of the revolutionary and national liberation movement and the historic struggle of our predecessors is of invaluable significance in informing the world view of the youth.

As we know, historical experience is multifaceted. One of its facets which pertains directly to the school is the activity of the teachers. In this connection we should like to give just one example of how the Russian teaching dynasty of the Ramenskiys, whose "family tree" goes back 500 years, served its nation. We should like very much to have our colleagues read about this in the next issue of the magazine NOVYY MIR.

The decree of the CPSU Central Committee which we discussed at the beginning of the article is new evidence of our party's constant concern for the schools and for prompt implementation of the reform. The decree points out that the measures taken up to the present time for restructuring the training and educational process do not provide for bringing the schools up to a qualitatively new level at the necessary rates. This important task must be carried out by all teachers and educational workers, above all their militant vanguard--the communists. There are hundreds of thousands of communists working in the education system, and there is a local party organization in each secondary school. This is an immense force!

The Ministry of Education has approved a broad plan of practical measures for implementing the decree of the CPSU Central Committee, whose components include improvement of the workstyle, skilled and prompt training of organizational-pedagogical and program-methodological documents, the organization of inspector control, and the study and introduction of advanced practice and the achievements of pedagogical science. Such are the main problems in our work which is being conducted on behalf of the great humanitarian goals of our party and people in the area of communist education of the younger generation, which are presented in the historic documents concerning the reform of the school.

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EDUCATION

USSR EDUCATION MINISTER ASSESSES NEW SCHOOL REFORMS

Moscow NARODNOYE OBRAZOVANIYE in Russian No 9, Sep 85 pp 2-9

[Article by S. Shcherbakov, USSR minister of education: "A New School Year"]

[Text] In the general educational and vocational technical schools, in the higher and specialized secondary schools, throughout the entire educational system of our great country, the most highly developed and democratic in the world, we have come once again to the beginning of a new school year, the 1985-1986 school year. And this school year is beginning at a special time. Energized by an intense enthusiasm and inspiration, the multimillion-strong Soviet people is preparing for the 27th Congress of the Communist Party, which will go down in the history of our country as an important historical milestone, draw the bottom line under the results of the titanic efforts of party and people in the concluding year of the Eleventh-Five-Year-Plan period and outline specific plans for the country's short-term social and economic development over the course of the five-year period immediately ahead and the programmatic, strategic tasks of the party and country for the longer term.

The April (1985) plenum of the CPSU Central Committee, the plenum which made the decision to convene the regular 27th Party Congress and outlined the tasks to be accomplished in preparing for and then convening the congress, marked a turning point in our national development; it stirred our people and strengthened still more their sense of historical optimism. It marked the beginning of a sharp and decisive turn in the direction of overcoming negative tendencies which began to build in the late 1970's and early 1980's.

In his report to the plenum and then to the CPSU Central Committee session devoted to a discussion of problems involved in stepping up the pace of our advance in science and technology, as well as in speeches to groups of workers and in meetings with party and managerial personnel from a number of regions of the country, M. S. Gorbachev, general secretary of the CPSU Central Committee, has drawn an impressive picture of the enormous successes the Soviet Union has achieved over the course of historically brief periods of time; he has presented a realistic assessment of the national economic situation and delivered himself of some frank and honest talk on painful problems. In addition to providing a comprehensive analysis of the basic problems confronting our society, the party is outlining realistic means and methods of stepping up the pace of the country's development socially and economically by accelerating progress in science and technology.

"We can begin to see the results of our efforts comparatively quickly," M. S. Gorbachev pointed out at the April (1985) Central Committee plenum, "if we exploit the hitherto untapped economic organizational and social potential available to us, if, first and foremost, we focus on the human factor and insure that each and every member of the work force labors conscientiously and gives his best effort."

Here we find the answer to the question with which not only our teachers, but all other personnel employed in our public school system are now intensely concerned, the question of their place, the role they will play in the effort to accomplish the tasks facing the country, the party and our people, tasks of truly historic importance.

The reform of the general educational and vocational school, which the party views as a critical factor in efforts to achieve general, systematic improvement in a developed socialist society, is aimed at the objective of activating the human component in these efforts.

"The youngsters now at their schoolroom desks are the ones who will be dealing with the monumental tasks to be tackled during the years remaining in this century and at the beginning of the next. It is they who will be charged with carrying on with the tasks of the Great October. Responsibility for the historical fortunes of the country, for the general progress of our society and for the success of its advance toward communism will rest on their shoulders," declare the basic guidelines of the reform.

The basic guidelines for the reform of the general educational and vocational school systems and the party and government decisions approved in implementation of these guidelines outline a scientifically based program of training and instruction for our youth, a program of education designed to prepare them for life and work in the modern-day world. Plans call for the basic elements of the reform to be implemented in phases taking account of differences in national characteristics and local conditions over the course of the eleventh and twelfth five-year-plan periods (1984-1990). But as was stressed at the April (1984) plenum of the CPSU Central Committee, this is no justification for delay: we must from the very beginning be taking concrete measures to upgrade our programs of training and instruction and the vocational training and guidance we provide our students.

The April (1985) CPSU Central Committee plenum reminded us of these things once again, that is, of the organic link between the school reform and the tasks now facing the country of intensifying economic activity by accelerating our progress in science and technology.

"We have launched a program of school reforms," M. S. Gorbachev declared in his report, "whose importance for the future of our country it would be difficult to overestimate. What is required now is that we approach this task, not with an eye to mere appearance, but rather with the objective of achieving the concrete results envisioned in the reform program and work for fundamental improvement in the quality of the training and education we are providing our younger generations and the preparation we give them for socially useful work."

It has now been roughly a year and a half since the CPSU Central Committee plenum and the USSR Supreme Soviet approved the basic guidelines for the reform. The coming school year, the second year now of what has been a systematic, increasingly intensive effort to implement the new reforms, is going to demand of the authorities at all levels of our educational administration, of the pedagogical collectives of our schools and other institutions of public education and from each and every teacher as an individual the mobilization of maximum effort, a deep sense of social responsibility and a realistic assessment of achievements.

The basic guidelines outlining the reform program have allowed all educators a broad scope for fruitful, effective creative activity.

It is still too early, of course, to discuss the ultimate impact of the reforms. But the comparatively brief period of time which has elapsed since the adoption of the program has already demonstrated the viability of these reforms and their importance for the socioeconomic development of the country.

What have we accomplished during this period?

For one thing, we have adopted a new standard program of instruction for the general educational school. Based on the new structure introduced for the 11-year secondary program, it establishes the outlines of the new program of courses. The program of basic, elementary instruction has been extended to 4 years. The new program establishes the proper relationships between the programs for the social and political sciences, the natural sciences and mathematics and the humanities. It calls for the introduction of some new subjects: "Principles of Information Science and Computer Technology" in the 9th and 10th grades, "Ethics and the Psychology of Family Life" in the 9th grade and vocational training for upper class students.

Guidelines have been provided for the effort to reduce the amount of unnecessarily difficult and essentially unimportant material in existing programs with an eye to the need to reinforce the trend toward placing greater emphasis on polytechnical and practically oriented courses and to improve instructional methodology. Efforts are under way to improve existing and prepare new textbooks and other instructional materials. Good textbooks are a critical prerequisite for successful implementation of our new programs. Working on the textbook project are teams of writers including scholars, methods specialists and some of our top teachers. All books intended for use in the schools are first used as textbooks on an experimental basis. Proposals are now in preparation which are calling for the organization of competitions to determine the best textbooks. As of September 1 our schools will be using substantially revised and updated textbooks for "Algebra VI," "Algebra VII," "Physics VI-VII," "Chemistry VII-VIII," "Zoology VI-VII" and other courses. A supplement with questions on trigonometric functions has been published for the "Algebra VIII" text.

As has been announced, the new course plans, programs and textbooks will be introduced in phases in accordance with timetables contained in the reform guidelines. The direction of advance toward better-quality instruction, however, is clear and precise. Taking the thinking behind the reforms as a guide, we are already in a position to accomplish a great deal. Evidence of the truth of this

can be seen in the changes which have been introduced by our best schools and instructional staffs. Unfortunately, however, such improvements have still to be adopted on a widespread basis.

The key, decisive role in efforts to improve the quality and increase the effectiveness of our educational programs and, accordingly, to implement the reforms belongs, of course, to the teacher. So in addition to taking steps to improve living and working conditions for our teachers materially, we have also developed and are implementing a program of measures aimed at improving the training and refresher programs we provide. We are also stepping up our effort to improve the instructional materials, equipment and facilities available to our schools.

We are also able to report concrete results of the major effort we have undertaken to improve general secondary school programs, an effort which has been carried through locally by the departments of public education and the pedagogical collectives of the schools themselves under the direction of party and soviet authorities.

Four million young people have completed the 8th grade of the general educational day schools in 1985. Of this number, 99.7 per cent will be continuing their studies in the full range of schools offering the complete secondary school program.

With the objective of providing the national economy with the skilled personnel it requires, we are continuing this year, just as we have throughout the Eleventh Five-Year Plan period, to increase admissions to vocational-technical schools on the basis of the partially completed secondary program. This is one of the indications that the educational system and the vocational-technical schools are working more closely together now.

Some 12 million young men and women have completed the secondary program in the general educational day schools over the course of the Eleventh Five-Year-Plan period, which includes 2.2 million in 1985. At the same time, we have seen 6 million complete the program in the general education night (shift) schools during this period. Including graduates of the secondary vocational-technical schools and the specialized secondary schools, a total of 23.6 million students have completed the program of secondary education this five-year-plan period, to include 4.4 million in 1985.

The Eleventh Five-Year-Plan period has seen the number of students in our general education day schools increase by 1.7 million to the present figure of 40.8 million.

During the period 1981-1985 the number of students enrolled in schools and groups with extended day programs rose by 2.4 million and now totals 13.2 million. The number of students enrolled in this particular general education program is increasing especially rapidly in grades 1-8 and in the preparatory classes.

The 1985-1986 school year, the second year of our reform program, must see the efforts of all personnel in the educational system focused on the objective of bringing the general education and vocational schools up to qualitatively new levels of performance. The role of the senior officials in our schools and the

authorities at all levels of the public school system and of all teachers and educators [uchiteli i vospitateli] consists in striving consistently to insure that students develop a thorough mastery of the principles of science and the relationship between these principles and everyday life and work, solid communist convictions and class consciousness, a love for work, moral purity and a love for and readiness to defend the socialist motherland and to educate students in the spirit of socialist internationalism and irreconcilable hatred of bourgeois ideology and morality.

The attention of all public education authorities and the pedagogical collectives in the schools must focus on the tasks of improving the quality of performance in all activities associated with our training and educational programs, raising the level of instruction in all subjects and in our vocational training programs, creating an atmosphere in the classroom which will nourish creativity and of encouraging maximum activity and involvement on the part of students.

The school year ahead is going to see the introduction of a great many interesting new additions to our programs. On September 1 we are going to introduce a new subject in our 9th grade curriculum: "Principles of Information Science and Computer Technology." Given the pace of progress in science and technology, modern-day science and manufacturing operations would be inconceivable without an extensive application of computers, robots and computerized systems. Consistent, effective implementation of party and government decisions in this area is one of the most important tasks of public education officials, school administrators, teachers and methods specialists.

The introduction of this new course will provide students with the knowledge and capacity they will need to utilize modern-day computer technology and with practical skills for operating computers and solving problems involved both in their academic work and in the field of activity they might enter later in life. Nor can we overlook the importance of this general education course as a tool for molding the way the individual looks at his world, the role it plays in helping the student learn to think logically. We must emphasize what it really means to eliminate computer illiteracy and the importance of this effort as an integral component of the national program to develop and then produce and effectively utilize computers and automated control systems. Prosveshcheniye publishers have put out the textbook students will be using in "Principles of Information Science and Computer Technology." The use of this book will help students familiarize themselves with the scientific and theoretical bases of information science and the principles underlying the operation of the electronic computer and lay the foundations of computer literacy. A methods handbook entitled "Studying the Principles of Information Science and Computer Technology" has been prepared to have available for instructors by the beginning of the school year.

To teach this course will be something new and by no means easy. This is why it is going to be so important at the very beginning to exchange experience, to adopt new pedagogical findings on a universal basis and generally to provide the instructors teaching this course with all possible assistance on a systematic basis. To achieve the best results from this course of instruction, schools and instructors have been urged while conducting it to remain in close contact with party and soviet officials, industrial enterprises and scientific institutions and organizations.

Another and no less important pedagogical problem is the formal study in a classroom setting of the new subject listed as "Ethics and the Psychology of Family Life." The instruction in this course has been designed to help students develop a socialist understanding of the family and marriage, an irreconcilable attitude toward bourgeois ethics and morals and to contribute to the education and development of the new family member. Prosveshcheniye publishers have brought out a new textbook for the course, "The Family," by T. Afanasyeva. This book has been published in an edition large enough to make it possible for every school library to have one. It is not a textbook in the usual sense of the term, however. Rather it should be read and then serve as a guide to discussion, particularly in the classroom during periods of instruction.

In planning and organizing for this new course, it must be remembered that the instructor will always have to take account of national differences, what with the fact that in addition to the general statutes on the books in each republic, they are all going to have their own traditions and customs. The union-republic ministries of education are quite properly at work on their own textbooks and other instructional materials on this subject, which will take these differences into account. Instruction in the course on ethics and the psychology of family life will be giving a good deal of attention to health education and the anti-alcohol campaign.

The course of instruction in all schools across the country will, of course, continue to place a major emphasis on the study of the Russian language, which Soviet people of all nations and nationalities have adopted on their own as the means of international communication. This instruction must be based upon the principle of practical mastery of both the spoken and written languages. The standard programs for instruction in Russian language and literature which have been developed for use in the various national schools will help program developers in the union republics and the methods specialists and instructors identify the basic elements in the instruction provided in these subjects, the critical elements in a program which insure a student's thorough mastery of the Russian language.

We should now focus the attention of the public education officials and school administrators to the changes the 1985-1986 school year will bring to the curriculum of the general education schools. First of all, the 9th grade will be devoting slightly less time to the study of mathematics, literature and foreign economic geography. How the instructional material should be rearranged so as to be more effective in these areas, what methods and approaches should be adopted in teaching these subjects, what material can be eliminated or only surveyed or summarized are questions concerning which recommendations have been offered in some of our specialized methods journals.

Classroom instruction and assignments still constitute our primary educational format. To teach the student how to perform effectively during these periods of instruction is one of the essential tasks of the school. Concern for the need to help the teacher increase the effectiveness of classroom instruction should therefore constitute a primary direction, a leitmotif, in the overall program of activities of our school and interschool methods associations, rayon and city methods centers and teacher training institutes. Their job is to make sure that experience accumulated in the planning, organization and classroom

presentation of instructional material in an effective way on the part of the master pedagogues, the public school teachers of the USSR, the honored teachers of the union republics and our senior instructors and methods specialists finds its way into the methodological arsenal of all teachers and educators.

To increase the effectiveness of classroom instruction requires that the teacher avoid overloading the students, that more time be available for vocational and professional training, that we search for the optimum combination of training and education with participation in socially useful and productive labor, sports and a variety of creative activities and that we improve the organization of the full range of extracurricular, nonacademic programs of training and education.

A wide range of nonscholastic activities helps the student increase his knowledge, expands the range of possibilities the student has in his study of an academic subject and offers an environment in which he can develop an interest in another sphere of knowledge. Unfortunately, however, a great many schools are still failing to take full advantage of the possibilities offered by elective subjects in the social sciences and humanities and those dealing with problems in economic, ecological and aesthetic education. There are still only a small number of study circles in our schools, particularly for students in the 5th-7th grades, as a result of which a substantial number of students remain uninvolved in a circle or any other form of nonscholastic activity.

The public education authorities and pedagogical collectives in our schools should also be giving special attention to a task of enormous social importance, that is, to the task of improving programs at the extended-day schools and groups. It is important that their activities be organized such that the children can choose those they want to participate in according to their own inclinations and interests: in circles and sections, in the music and sports schools. It is also time to give some thought to the question of how to activate Pioneer work in the extended-day groups and put more life into the activities of the organs of student self-government, which are aimed at helping students develop a conscious self-discipline and a responsible attitude toward their studies and their work. Particular attention should be given to the matter of allowing student committees a greater role, of transforming them into active assistants to school officials and teachers. It is also important to give Komsomol committees a more active role in the ideological-political, vocational and moral development of the students.

We must also take a new approach to the school's work with parents. This would involve putting our primary emphasis on the organization of a variety of extracurricular activities for students which they could participate in in accordance with their own individual interests and helping parents organize these activities with their children on their own.

As is already generally known, the provisions of the new reforms call for essentially a phased introduction between 1986 and 1990 of a program of instruction which will begin at age six. Much has been done over the past year and a half to prepare to begin instruction for 6-year-olds on September 1, 1986. Each republic, oblast and a great many cities and rayons have taken concrete steps to prepare teachers, assemble the necessary materials and equipment and resolve a number of the methodological questions concerning the organization of the program of instruction taking the characteristics of the 6-year-child into consideration.

One result of these efforts will be that the coming school year will see some 1.2 million 6-year-olds enrolled in our preparatory classes. This is almost double the figure for 1980. We have now gained a considerable fund of experience, on the basis of which we will begin 1st-grade instruction for 6-year-olds in the following school year. Full implementation of this important social and educational measure on schedule is going to depend on our ability to create all the necessary conditions as far as organization and teaching materials and equipment are concerned.

To provide instruction for 6-year-olds entails a number of challenging pedagogical, psychological and organizational problems. We are now in the final stages of work on the preparation of special programs and textbooks for the very youngest of our school-aged children. This instructional material is the product of many years of experimental use, and the results of this experience will also be taken into account in revising the standards governing the organization and conditions of this particular program. We don't want to overload the 6-year-old with the purely academic exercises. Instruction for this age group should also be making more use of games involving motion, field trips, musical exercises, graphic art etc. Teachers are going to require some special preparation.

To prepare to teach 6-year-olds will also require the creation of the proper material base. They are going to need not only classrooms, but sleeping rooms for their afternoon naps and play rooms as well. Steps are being taken to speed up the manufacture of special furniture, soft equipment and toys and special visual aids for classroom instruction. Special efforts will be required to provide meals for children of this age and to organize systematic medical examinations in a health maintenance program.

We cannot, of course, push on with the organization of classes for 6-year-olds where existing conditions do not warrant, but neither can we afford to take our time with the creation of these conditions if this is still necessary. This is an important responsibility of our local soviets and public education officials. The central (sponsoring) enterprises are also called upon to provide a good deal of the support required at this stage.

In accordance with the provisions of the reform program, more attention is going to be given to the development of our system of general and special preschools and to an effort to improve the program of activities they offer. We are now in the midst of preparations to change over to a new program of kindergarten instruction. The tasks of improving the quality and the methods employed in the organization of the children's activities, developing their creative abilities and enthusiasm for serious work in a variety of activities and of making greater use of games and literature in developing the individual personality all require greater attention. We need to bear in mind the importance in this connection of maintaining an effective degree of continuity between the kindergarten and elementary school programs. We also need to give more attention generally to the effort to protect the lives and health of our children, to provide for their meals and to improve the quality of the physical education programs for preschoolers.

To combine academic schooling with socially useful, productive labor is a central problem the reform program has had to address. It can now be said that the school has taken a major stride forward in this respect. With continuous assistance from

party, soviet and industrial officials, the schools and key enterprises are now cooperating more closely and more extensively. A great many of them have now concluded agreements covering the vocational and professional training for students. Together with the industrial ministries, plan targets have been established in the area of providing positions for young people. The educational plan for the Eleventh Five-Year-Plan period provides for a greater number of hours to be devoted to vocational and professional training and introduces a program which requires time to be spent in socially useful labor and production work outside of class time.

The USSR Council of Ministers has approved the statute establishing the base enterprise for the secondary general education school. Together with Goskomtrud SSSR [State Committee of the USSR Council of Ministers on Labor and Wages], Gosprofobr SSSR [State Committee of the USSR Council of Ministers on Vocational and Technical Education] and the All-Union Central Council of Trade Unions, the USSR Ministry of Education has prepared a list of specializations for students in the general education schools which includes 760 of the so-called mass vocations. This list will be revised and extended in the future.

We are continually strengthening our student vocational and professional training programs as well. The production-training combines now number more than 2700 with over 6000 training shops now in operation directly in the enterprises themselves.

Among upperclassmen some 2.1 million are currently enrolled in training programs in our interschool production-training combines. The feature of this form of vocational and professional training which makes it most effective is the possibility it offers students to receive training in a great many specializations simultaneously taking account of both their own personal interests and the needs of the national economy.

Some 35 per cent of all upperclassmen will undergo training in the training shops of our industrial enterprises themselves. The advantages this form of training offers young people are obvious: it brings them into immediate contact with the daily routine of the work collectives, provides them with skilled assistance by highly skilled master workers and instructors and gives them an opportunity to work with new equipment and the latest in technologies. The problem of finding opportunities to perform productive labor does not arise in this case. Some 40,000 students will be working in the production training facilities of our vocational and technical schools.

The efforts of the production-training combines have proved less productive in rural areas. A number of experts have expressed the view that field-crop specialists, animal husbandrymen, combine operators and drivers would be more successfully trained directly on the kolkhozes and sovkhozes where they live and work. The most efficient solution would be to create student training associations on specially designated base farms. A continually increasing number of rural students are going to work on student production brigades. As experience has shown, these organizations are most successful in cases where the brigades are specially assigned certain farms and fields, arrangements which offer the conditions and opportunities for students to participate in the entire work cycle—from sowing to harvest.

One result of a properly organized program of vocational training, education and guidance in the schools has been that a substantial proportion of students completing the 8th grade are continuing on with their secondary education and receiving vocational training in our system of vocational-technical education, while students completing 9 years of school find specialized employment immediately upon completion of their secondary schooling in industrial enterprises or agriculture.

At the same time, however, we are still seeing no small number of deficiencies and difficulties in the system of vocational and professional training we offer the students in our general education schools. It is not infrequently the case that the base enterprise gives the school no help in finding opportunities for productive work in the production-training combines and school workshops, fails to place orders for industrial goods or allocates no raw materials. Schools often encounter difficulties in organizing production training for students in the enterprise facilities themselves. Students are occasionally not included in a socialist production relationship or in any of the present-day forms of manpower organization (brigade contract, cost-accounting, participation in socialist competition etc.). The Komsomol organizations in the schools are not always working closely with those in the enterprises and participating in joint mass political, cultural and sports activities. In consequence of these shortcomings and deficiencies, the opportunities our students have to engage in this productive labor do not always contribute all they can to the communist education of these young people or to the development of the individual personality, civic responsibility and high moral qualities.

We can also identify a number of serious deficiencies in the organization and content of our vocational guidance programs. There is still too much of the purely formal approach here. Vocational guidance is all too often diluted down to the providing of vocational information services; the approach is superficial, and what guidance there is is coming too late—we're waiting until the student is almost ready to begin his final year of school. And we're not always taking account of the psychological characteristics of our young people and the special features of this age group. There are enterprises which are essentially refusing to involve themselves in these programs. Nor are the parents being effectively engaged. And while the schools and the vocational and technical people are now cooperating more effectively, they are by no means always working together to help young people define their goals in life and choose the career field that suits them best.

To strengthen the ties between the general educational school and industry is one of the critical tasks facing school administrators and public education officials. We need to focus more effort on the creation of conditions which will allow us to introduce a program of weekly, socially useful, productive labor for students and vocation training for the upperclassmen. This would include, first of all, the creation of training shops and sections in the enterprises, enlarging the system of interschool production-training combines and shops and increasing the effectiveness of the vocational guidance provided the students. We should also be arranging more socially useful, productive work for 8th grade students in the interschool production-training combines and the training shops and sections of the enterprises and at the secondary vocational-technical schools for students in grades 8-10(11).

Fundamental improvements in the physical education we provide our students are also an important precondition for the improvements in the educational system called for in the school reform program. The integrated physical education program to be introduced at the beginning of this school year will play an important role here. The objective as announced in this programmatic document consists in insuring that conditions be created for accomplishing the primary task of organizing daily physical education and sports activities for all students. With a view to achieving this objective, the reform calls for the schools to introduce a program of physical education activities both during and after school, which will be integrated into a single system based upon the national GTO physical education program.

School officials are going to have to take a number of steps to insure that this integrated program of physical education is implemented more effectively. First and foremost, they are going to have to create an atmosphere of general interest in seeing that each and every school implements this program to the fullest possible extent as a means of maintaining the health of the students and of providing them with more opportunities for physical activity. It will also be necessary to involve all instructional personnel, Pioneer, Komsomol and other student organizations and parents' committees in the implementation of this program and the organization of all the extracurricular activities which will be associated with it. Daily involvement and assistance on the part of the physical education aktiv among the students—upperclassmen acting as instructors and referees, for example—will be a critical factor in the success of the program. Nationwide we now have more than 4 million of these students. To involve this aktiv in practical activities aimed at increasing the number of students engaged in sports and physical education programs is now an urgent task on the agenda of our schools.

Bigger and better sports training facilities are an important precondition of success in the implementation of this integrated program. Each school is going to have to undertake a concerted effort to expand the area it has available for physical education, upgrade the equipment of the least well provided-for of its athletic grounds and find ways to install the equipment they really need. The supporting (sponsoring) enterprises and organizations are called upon to render the schools the effective assistance they require in this effort.

To make each and every child, each and every youngster, young man and young woman aware of the importance of physical education is one of the critical preconditions for successful accomplishment of the task of involving our students in a systematic program of physical education activities on a mass scale. Crucial to this effort in turn is a fundamental improvement in the quality of the instruction we provide in our physical education programs in all its present-day aspects. We should strive to insure that each and every session of instruction helps the student develop an ability to use the knowledge and skills he acquires in independent exercises and a thorough, conscious understanding of the essential characteristics of each exercise, the importance of the activity involved and the effect of this activity on his health and the development of a greater range of physical instincts, skills and capabilities.

With the objective of making the schools more accountable for the effectiveness of their physical education programs and of insuring that they provide students with the proper quality of instruction in physical education, the USSR ministry of education plans to introduce a program of physical education testing

during a student's final year beginning with the 1985-1986 school year. I believe this measure will have a positive impact on the overall effort to improve the physical education program.

Here is a task, to sum up, which we must carry through—the task of insuring that the masses of our students participate in a program of physical education based upon this intergated program of instruction.

There is surely no need to dwell on the importance of the role the public education authorities play in the implementation of this program of reforms. To provide competent leadership for our schools and other training and educational institutions, to strive resolutely to put an end to all manifestations of formalism and bureacratism and to elevate the style and improve the quality of the performance of our educational administration remains a task at the top of the agenda. The effectiveness with which we can combine the efforts of teachers, the work collectives of the supporting enterprises and parents is going to depend in large part upon the initiative and effectiveness of our administration.

Planning the network of schools, staffing them with teachers and filling them with students, channeling the streams of youngsters completing the incomplete secondary and secondary schools, creating the conditions necessary for a program of effective vocational training and education and building and effectively utilizing training materials and equipment are all important concerns of our public education officials. Responsible officials within our educational administration and the heads of the pedagogical collectives in the schools should also be giving more attention to efforts to improve the methodology employed in classroom instruction and to the need for more effectively planned and organized instruction both in the classroom and in extracurricular activities.

The call in the basic reform guidelines for decisive improvement in both the style and methods of operation of our public school administration becomes particularly timely in the light of the decisions of the April (1985) CPSU Central Committee plenum. Special attention should be given to a thoroughgoing analysis of the content of our educational programs. We need to insure that each and every inspection brings practical benefits and serves the interests of the schools. In addition to the services they render in the field of methodology, our educational authorities should also be alert and prepared to seize upon anything new and valuable presenting itself from practical experience; they should be able to analyze it effectively and then make it available to one and all. New ideas and innovations evolved in implementing the new reforms are one of our priceless assets.

One of the most important responsibilities of the public education authorities is to render all possible assistance to our teachers, help them grow as professional pedagogues and develop their mastery of ideology and theory and demonstrate a concern for insuring that they enjoy the best living and working conditions possible. Officials of the schools and both nonacademic and preschool institutions should work together with party and trade union organizations to create a creative atmosphere in each pedagogical collective and to help develop and strengthen a climate of mutual exactingness and respect, mutual confidence and comradely mutual assistance.

The success of any school's training and educational program is ultimately going to depend on the teacher. As was observed at the June (1983) CPSU Central Committee plenum, the teacher is an individual our society has entrusted with the education of its children and one of the party's reliable supports in agitation, propaganda and any other ideological activity. The sources of many of the civic virtues and of the knowledge which will be put to the service of mankind for long years into the future are inseparably linked to the efforts of our 3-million-strong army of school teachers.

The coming school year must see us give greater attention to the training and political and spiritual development of our pedagogical cadres and to the effort to insure that they develop a more thorough mastery of methods to be employed in the struggle to assert the principles of Marxist-Leninist ideology and the socialist way of life and insure that they are informed on a regular and timely basis on issues involving both the domestic life of this country and the international situation.

The task of officials of the public education system is to render teachers continuous assistance and support and daily to help them develop a sense of personal responsibility for the results of their efforts.

In the effort to improve the qualifications of our pedagogical cadres it is going to be necessary to focus more attention on a study of the key problems in the basic school reform guidelines in light of requirements set forth at the April (1985) CPSU Central Committee plenum. Courses, seminars and other forms of practical training need to be emphasizing the broad range of possibilities which present themselves to the teacher in the way of available methods, forms and means of instruction and alternative approaches to the organization of lecture courses and seminars for upperclassmen and of choices to be made in planning the most efficient utilization of classroom materials and equipment. We need to move systematically and decisively to eliminate any manifestations of formalism in evaluating the performance of teachers and students and the petty supervision and control of instructional activities.

An important task ahead of our methods training institutions is to prepare mathematics and physics teachers to teach the new course "Basic Principles of Information Science and Computer Technology." This past summer has seen advanced teacher training institutes all over the country heavily engaged in efforts to set up these training courses at institutions of higher education for some 60,000 teachers of physics and mathematics in the secondary general education schools. But this is only the beginning of the enormous effort our teacher training schools are going to have to undertake to train instructional personnel in all categories to use computers in their educational programs, and not only in the schools, but in the nonacademic institutions involved as well and to select, analyze and then publicize the experience gained in this area by the best teachers.

Teacher training schools and the faculties of pedagogical institutes and universities in the RSFSR, UkSSR and BSSR will continue their programs to upgrade the qualifications of teachers of Russian language and literature in schools in which the language of instruction is not Russian. Programs of advanced teacher training in this area must be oriented toward the primary objective of insuring that a

graduate of the secondary school program develops a thorough mastery of the Russian language, the language of friendship and brotherhood of all nations and nationalities of the USSR.

One of the most important objectives of the reform program is to effect a fundamental improvement in our vocational training and education programs and in the vocational guidance we provide our students, that is, in the preparation we give them for the job they will be doing later in life. It is for this reason that we need to expand and intensify our programs aimed at improving the skills of personnel of the enterprises and organizations involved in the vocational and professional training of our students and the ability of these people to direct a program of socially useful, productive work as production training supervisors and instructors. Programs for such production personnel should give particular attention to the study of pedagogy, psychology and the methodologies to be employed in the vocational training, education and guidance of our students.

Careful attention must also be given to insure that we provide timely, high-quality training for teachers in the lower grades who will be responsible for the training and education of the 6-year-olds. It is recommended that training courses for these teachers make maximum use of the results of experimental projects and the best experience in the teaching of 6-year-olds which has been gained by our best teachers. It is important to prevent those methods used to teach older students from being mechanically carried over in teaching 6-year olds.

The reform program is placing greater emphasis on the role of teacher certification as an effective and efficient way to improve the performance of pedagogical collectives in the training and education of students and in preparing them for life and a vocation. Pursuant to the decree of the CPSU Central Committee, the USSR Council of Ministers and the All-Union Central Council of Trade Unions of April 12, 1984, certification is now required for Pioneer instructors and leaders in all types and categories of general education schools, boarding schools and children's homes, as well as for preschool instructors. More than 3 million pedagogical staff will undergo certification or recertification once every five years, over 700,000 each year. Public education authorities are going to have to develop a program of specific measures and guidelines to govern the preparation and implementation of this important large-scale undertaking, first and foremost to insure timely selection and approval of certification committee personnel and that all personnel involved in the implementation of the program are thoroughly familiar with provisions of the statute governing certification of pedagogical cadres. Particular attention must be given to an effort to make the certification proceedings as open as possible, in an atmosphere of intensified creative activity, one in which each and every teacher, instructor and senior Pioneer leader feels a sense of personal responsibility for the results of his efforts, to insuring that the evaluations of performance are as objective and well-founded as possible and to making certain that the certification process overall is monitored closely and continuously. Implementation of these measures will help increase the effectiveness of the certification program and enhance its role as an incentive to strive for continuous improvement of the ideological-theoretical and professional mastery of our pedagogical cadres in light of the requirements of the school reforms.

His heroic, selfless labors devoted to the training and education of the younger generations have won the Soviet teacher the profound gratitude and respect of our people. The Communist Party, the Soviet Government, all socialist society praise the work of our teachers. Efforts to implement the school reform program have brought the introduction of new forms of both moral and material incentives for teachers. To the high titles of People's Teacher of the USSR, Honored Teacher (in the union republics) and the awards for excellence in education we have added the Order of Labor Glory, the Lenin Komsomol prize and the N. K. Krupskaya prize, among others. We have also developed and introduced an effective system which offers a variety of incentives to personnel in our educational administration, who labor selflessly, devoting their knowledge and experience to the effort to train and educate the younger generations.

Analysis of our experience, however, shows that in evaluating the performance of teachers [uchitelya] and educators [vospitateli] not all public education officials and school administrators are relying on thorough, comprehensive analysis of the quality of the programs of instruction being conducted, how competently the instructors are performing, the knowledge their students have actually mastered and the true level of their education, which does not allow them to select the teachers who really deserve an award. The demands placed on the performance and results of each teacher up for certification and the criteria employed in evaluating them must be based upon competent, objective analysis of this performance. The formalistic, one-sided or purely superficial approach would be completely unacceptable here.

To expand, strengthen and qualitatively upgrade the material base of our educational system constitutes another important task of the public education authorities and our educational institutions.

The school construction program is making good progress. According to preliminary data, the five-year plan for the construction of general education schools will be fulfilled in both urban and rural areas, which is most important during the period of implementing the school reform program. Taking financing from all sources into account, the 1981-1984 period has seen the construction of new school buildings capable of accommodating more than 4 million students. We are seeing positive results in construction in the RSFSR, the UkSSR, the Uzbek SSR and the Georgian, Kirghiz and Estonian SSR's, where school construction plans are being fulfilled and overfulfilled.

No less important is to fulfill the plan for construction of preschool facilities. Taking all sources of financing into account, the first 4 years of the Eleventh Five-Year-Plan period have seen the opening of new preschools and day nurseries offering places for 2.3 million children. The status of the preschool construction programs in the RSFSR, the Belorussian SSR and the Lithuanian and Estonian SSR's has improved over the past 2-3 years. But most of the union republics have fallen far off the pace over the first part of the current five-year plan, so they are going to have to catch up by the end of 1985 if the country as a whole is going to achieve its goals for the five-year-plan period.

The ministries of education of the union republics and local public education authorities must give continuous attention to progress being made on school construction projects, particularly monitoring projects more closely to insure good-quality work and timely completion.

Reform guidelines for the general education and vocational schools call for better standardized school building plans. Approved pursuant to the CPSU Central Committee and USSR Council of Ministers decree calling for improvements in the general secondary education program and in the conditions of operation of the general secondary schools, "Building Categories and the Composition and Area of General Secondary School Facilities for Standardized Planning and Design during the Period 1985-1990" conforms fully to requirements presently imposed on the educational process.

In addition to classrooms, the new standard plans designed to create conditions required to accommodate the 6-year-olds call for special play and sleeping rooms located in another unit of the building. The number and size of the rooms designed for foreign language instruction have been determined taking account of the subgroups into which the classes are divided. Plans for the secondary schools call for the construction of information science and computer rooms. New standards will permit dramatic improvements in vocational training and education and vocational guidance programs with the combination of the classroom instruction with actual productive work, for which we have greatly enlarged the production training facilities. All secondary schools, including those which are underequipped, are scheduled to be provided with facilities to be used for vocational guidance and instruction in the fundamentals of production. Plans also call for major improvements in physical education facilities. We are enlarging the sports facilities in all secondary and incomplete secondary schools. A great deal of attention is being given to the creation of conditions which will make it possible for us to feed our youngsters efficiently, to which end we are enlarging dining facilities and school lunchrooms. The size of the libraries in all schools is being increased an average of 25 per cent. A number of other positive changes and additions are being introduced in the new standard school plans.

To meet construction targets approved for 1985 and lay a solid foundation for the fulfillment of plans for the construction and equipment of schools during the Twelfth Five-Year-Plan period are top-priority tasks for our public education authorities.

We have seen definite improvements in the manufacture and provision of schools with furniture, books and equipment.

This year has seen the first deliveries of the instructional computers, which include 1200 Agat personal computers, 400 DVK-1 and DVK-2 etc., which are going to be installed in the information science and computer technology classrooms.

Requests for equipment for classes in vocational specializations such as automotive mechanics, tractors and agricultural machinery, animal husbandry and electrical machinery have been satisfied completely. More laboratory and other equipment required for the applied aspects of our training programs is being manufactured this year than last. Instructional equipment such as film and graph projectors, control devices and language laboratory equipment for the creation of new and the upgrading of existing Russian language instruction facilities in schools in the union republics is being made available in larger quantities. This year, 1985, will see the development of 204 new types of equipment and instructional texts for all subjects and the vocational and professional training programs for the new 6-year-olds.

The authorities in the public education system and the pedagogical collectives in the schools are going to have to insure that these materials and equipment are put to use in our effort to accomplish the objectives of the reform program, particularly in the construction of new and the upgrading of existing classrooms, production training shops and physical education facilities. Particular attention must be given to the creation of conditions required for the instruction of 6-year-old students. Attention should be focused first and foremost on the construction of new and the improvement of existing vocational training facilities and Russian language classrooms in schools in the union republics.

It is important that we strive continuously to insure that schools make better, more effective use of the educational films they have, their instruments and equipment, their textbooks and the furniture and that they work to improve the instructional methodologies they employ.

We are coming to the end of the Eleventh Five-Year-Plan period. What we want to do is to insure that we meet the targets for the five-year plan as a whole. And in doing this we will be laying a good, solid foundation upon which to build during the Twelfth Five-Year-Plan period and able to render a worthy salute to the 27th Congress of the CPSU. In a word, we have an enormous amount of critically important work ahead of us, efforts taking us in new directions, as we move to implement the basic guidelines governing the reform of the general education and vocational schools, the decisions of CPSU Central Committee plenums and party and government decrees on the schools. From all teachers, educators and public education officials this is going to require an enormous amount of concentrated effort and the application of strength, experience and energy in implementation of the noble, moral and humane provisions of the school reform program.

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EDUCATION

BSSR EDUCATION OFFICIALS ANALYZE VUZ CURRICULUM

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[Article by Professor F. N. Kaputskiy, deputy minister of higher and secondary special education, BSSR, and Assistant Professor B. A. Kaledin, chief of the Administration of Science, BSSR Minvuz [Ministry of Education], under rubric "Science in the Higher School": "Belorussia's Institutions of Higher Learning for the National Economy"]

[Text] Success in the resolution of the stupendous tasks of building the material-technical base of communism and of indoctrinating the man of the communist future is largely determined by the rates of scientific-technical progress. The front line of the struggle for that acceleration, as General Secretary of the CPSU Central Committee, Comrade M. S. Gorbachev remarked at a conference that was held at the party's Central Committee, runs through science.

An important role in this matter is played by the higher school system, which has been called upon not only to provide the national economy with highly skilled specialists, but also to expand in every way the link with practical life and with production. The integration of science, technology, and production is one of the decisive conditions for the acceleration of scientific-technical progress.

In the higher school system of Belorussia, a large amount of attention is devoted to developing and raising the effectiveness of science, since one finds in the institutions of higher learning a concentration of almost one-half the total number of doctors and candidates of science in the republic, and the total number of instructors exceeds 13,000. A mighty impetus to the intensification of the work in this direction was provided by the well-known decrees of the CPSU Central Committee and the USSR Council of Ministers, entitled "Increasing the Effectiveness of Scientific-Research Work in Higher Educational Institutions" (1978) and "Measures for Accelerating Scientific-Technical Progress in the National Economy" (1983).

Looking back on the path that has been traveled during the past six years by science in the institutions of higher learning, one can note with a sense of satisfaction that it has made a significant contribution to the development of scientific-technical progress in our country. There has been a strengthening

and expansion of the contacts between the institutions of higher learning and production. For example, during the time that was indicated, the number of instructional-scientific-production associations has more than doubled (from 20 to 47); there has been an increase by a factor of 1.3 in the volume of NIR [scientific-research projects -- hereinafter SRP] based on economic contracts; 31 new branch scientific-research laboratories have been opened; there has been an increase by a factor of 1.6 in the number of developments by institutions of higher learning which were introduced into the national economy and an almost doubling (from 42 to 77.6 million rubles) of the economic benefit derived from using them.

The results of 1984 and the first four years of the 11th Five-Year Plan are much better than the results of 1983 and the 10th Five-Year Plan as a whole. For example, during the first four years of the current five-year plan the volume of SRP has surpassed by 1.5 times the number of projects fulfilled during the entire 10th Five-Year Plan; there was an increase of 1.2 times in the number of positive decisions to issue originator's certificates [Soviet patents], and an increase of 4 times for the issuance of patents. The economic benefit obtained from the introduction of the results of SRP in 1981-1984 came to more than 314 million rubles (in the 10th Five-Year Plan, 230 million rubles). For many of the relative indicators of the status of science at institutions of higher learning, BSSR Minvuz occupies leading positions among the ministries of higher learning of the union republics. The development of research in our institutions of higher learning during that period of time has been characterized not only by the quantitative indicators, but also by profound qualitative shifts in the organization, planning, and fulfillment of SRP. The most serious attention continues to be directed toward the raising of the level and significance of the fundamental projects. For example, the Belorussian Polytechnical Institute has been conducting research on reference and coupled-motor roadability, and on running-gear systems for agricultural machinery; Belorussian University is conducting research that has the purpose of studying the mechanization of the antitumoral effect of hypertension and hyperglycemia; and the NII [Scientific-Research Institute] of Applied Physical Problems at that university, the development of methods for modifying the physicochemical properties of materials and the creation of new foamed polymer heat-insulating and sound-insulating materials. Projects that are deserving of high evaluation are those at the Minsk Radio-Engineering Institute in the field of microelectronics technology. In recognition of the creation of its scientific principles, a group of scientists at that institute has been awarded prizes (two first and one second) of the Presidium of USSR Academy of Sciences.

The high level of a number of fundamental research projects that were conducted by the scientists of our institutions of higher learning in 1981-1984 was recognized by two USSR State Prizes, eight BSSR State Prizes, prizes of the USSR and BSSR Councils of Ministers, USSR Minvuz, USSR Academy of Sciences, and Central Committee of USSR and BSSR Komsomol. Thus, in recognition of his participation in the project "Highly Effective Nonlinear Frequency Conversion in Metals and the Creation of Retunable Sources of Coherent Emission" Rector of Gomel University, Academician of BSSR Academy of Sciences B. V. Bokut was awarded a USSR State Prize in 1984. BSSR State Prizes were awarded to Prorector of Belorussian Polytechnical Institute,

Corresponding Member of BSSR Academy of Sciences A. Stepanenko, in recognition of his projects in the field of creating a technological scheme with the application of ultrasonic oscillations; to Professor I. K. Lopatin, for his teaching aid "Osnovy zoogeografii" [Principles of Zoogeography]; and Assistant Professor D. Ya. Bugayev, for his monograph "Talant i Trud" [Talent and Labor] (last two mentioned are both from Belorussian University).

In the republic's institutions of higher learning there has been a broadening of the subject matter in the fundamental research projects being carried out with the purpose of replacing primary raw materials by secondary ones, and the creation of technological schemes with little or no waste products. In particular, BPI [Belorussian Polytechnical Institute] has been developing a technological scheme for obtaining from phosphogypsum raw materials for the cement and gypsum industry, as well as a technological scheme for processing electric-power station waste materials -- gypsum-containing slags -- into building materials and articles. BGU [Belorussian State University] has been developing research projects that are aimed at developing technological schemes with no waste products for decontaminating runoff water and precipitation with the purpose of using them in agriculture. Important scientific results have also been obtained by representatives of the social and natural-science disciplines and the humanities.

Nevertheless we feel that the task of developing the fundamental research projects in our institutions of higher learning remains one of the chief ones, and that the percentage of state-budget topics in the overall volume of scientific-research projects is too small, and the results of those projects can be more significant. Therefore we are doing everything to reinforce the cooperation with the academies sciences of the USSR and the BSSR, and of the other union republics. At the present time close creative ties have formed among the workers at the institutions of higher learning and the scientists at the academy institutes. Suffice it to state that our institutions of higher learning are taking part in the fulfillment of 300 projects that have been included in the BSSR Academy of Sciences plan for the most important research projects in the field of the natural and social sciences for 1981-1985. In the research that is being coordinated by the USSR and BSSR academies of sciences, the participants include more than 3200 scientific-pedagogical workers at institutions of higher learning (34 percent of their total number), including 15 academicians and corresponding members of BSSR Academy of Sciences. In turn, almost 500 associates at academy institutions, including 61 academicians and corresponding-members, have been attracted to participation in the teaching process of the institutions of higher learning.

Questions of the cooperation between the higher school system and BSSR Academy of Sciences have been discussed repeatedly at joint sessions of the presidium of the Academy of Sciences and the board of BSSR Minvuz. All this has contributed to the more correct choice and coordination of the subject matter in the fundamental research being conducted at the institutions of higher learning, and to the raising of their technical level.

Cooperation with USSR Academy of Sciences is carried out, as a rule, by means of the joint fulfillment of comprehensive target and scientific-technical programs. At the present time there are 12 of them. Among them one can

mention the joint development by Belorussian Technological Institute and the Institute of Nuclear Energy imeni I. V. Kurchatov, USSR Academy of Sciences, of new, promising methods of industrial obtaining of hydrogen. The Institute of Chemical Physics, USSR Academy of Sciences, has introduced thin-layer polycrystal coatings that were developed by Belorussian University. One could cite many such examples.

Other than the projects being conducted in conformity with the comprehensive programs and coordination plans, the institutions of higher learning and the academy institutes make it a broad practice to maintain such a form of contact as contracts dealing with scientific-technical cooperation (of which there currently are more than 250). The research being carried out in conformity with those contracts is extremely effective.

The institutions of higher learning make rate active use of the rich experimental base of the academy institutes, various academy centers of servicing scientific research projects, and the VTs [Computer Center] of the Institute of Mathematics, BSSR Academy of Sciences.

The republic's higher educational institutions devote constant attention to the development of scientific-research projects conducted on the basis of economic contracts. Their volume, as compared with 1978, increased by a factor of 1.6 and in 1984 reached almost 40 million rubles. The basic emphasis was placed on increasing the share of the most important subject matter, the average and average-annual cost of the scientific-research projects conducted on the basis of economic contracts, and the reduction of the time periods required for their fulfillment and the more rapid introduction of the obtained results into production. A few things have been achieved in this regard: the share of the most important topics in the overall volume of research conducted on the basis of economic contracts rose to 75 percent, the average and average-annual cost of the contract, respectively, surpassed 104,000 and 31,000 rubles, and the time periods required for the fulfillment and introduction of the results of the research were reduced. That was also promoted by a number of scientific-organizational measures that were aimed at improving the quality of planning, organization, and administration of the scientific-research projects both at the institutions of higher learning and in the ministry. Certain normative documents were developed and introduced (statutes governing NIS [expansion unknown], governing the use of the results of scientific-research projects in the national economy, governing the patent processing of the topics, etc.), and a target program has been formed and is being successfully fulfilled for increasing the effectiveness of scientific-research projects at the ministry's institutions of higher learning, which program encompasses all the links and stages of the creative search and which stipulates a further increase in the scientific potential of the higher school system, as well as a number of measures that are aimed at improving the administration of the research.

We have carried out a random analysis of the annual (1984 and 1985) plans for scientific-research projects for the subordinate institutions of higher learning; at each of them a scientific-technical council has been created for the purpose of giving expert advice on the topics proposed for the plan, and exhibitions have been organized to acquaint the representatives of the

ministries and departments with the most important achievements of science at the institutions of higher learning. There has been a considerable improvement in the organization of research conducted on the basis of economic contracts, and steps have been taken to improve the system of monitoring the rate of their fulfillment and the efficient use of the funds allocated for that purpose, etc.

At the same time, the scientific work at the institutions of higher learning is not yet free of shortcomings. The chief task -- the achievement of the maximum benefit from the funds being invested in science at the institutions of higher learning -- is still being resolved slowly. The dispersion of scientific-research projects and the existence of too many topics in the subject matter have not been completely eliminated; the share of projects of secondary importance is still unjustifiably large. At certain institutions of higher learning, there has been a decrease in the demandingness with regard to the rate of results in the research, and little is being done to monitor their quality and the timeliness of the completion of the various stages of that research.

That is why we are currently shifting the center of gravity in the work of the apparatus of administering the institutions of higher learning to the acceleration of the rates of fulfillment of the research projects, and to the rapid and broad introduction of scientific-technical achievements into practice. We proceed from the assumption that the chief result of the research is to achieve concrete, tangible material results that have found their embodiment in production. Therefore we constantly improve the forms of contact with the enterprises and branches, and strive to work in accordance with joint plans. The basic attention of the scientists at the institutions of higher learning at such time is concentrated on the creation of progressive materials, energy-saving and materials-saving technological schemes, means of automation, automatic manipulators and robots, mineral fertilizers, and the biotechnology and technology of storage of agricultural output. Developing cooperation with production, our institutions of higher learning not only increase the quantity and volume of research conducted on the basis of economic contracts, and the number of ONIL [public scientific-research laboratories], but also make wide use, for the purpose of accelerating the introduction of scientific-technical achievements, of contracts pertaining to creative cooperation and the transmittal of the results of the scientific-research projects, and organize scientific-research laboratories at enterprise areas. In particular the number of ONIL has exceeded 50, and 9 laboratories have been created at enterprise areas.

We would like to cite certain results of the fruitful cooperation between the institutions of higher learning and production. The Neman device which was created by Grodno University, and which is intended to automate the operation of milking apparatus, is protected by a number of inventions, and has been recommended by an interdepartmental commission for series production, makes it possible to increase the milk yield by 5-10 percent and reduces the mastitis disease rate among cows. The economic benefit from the use of 70,000 such devices constitutes approximately 20 million rubles on the scale of the entire republic. The Neman device is patented in seven countries.

The introduction of a magnetographic defectoscope designed by BPI at the Russkiy Dizel Plant has made it possible to reduce the idle time of ships being repaired from three months to two weeks, and this has yielded a saving of more than 1.3 million rubles a year. The expansion of the scope of the introduction of this invention (for example, for the purpose of checking the quality of the welded seams of large-diameter pipes) will increase its economic effectiveness even more.

It is also necessary to mention the active work being carried out by the scientists at Minsk Radio-Engineering Institute to introduce developments. They have created dozens of fundamentally new technological schemes and devices that have been recognized as inventions, and have successfully introduced those technological schemes and devices into the series and mass production of microelectronic articles at several PO [production associations]. This resulted in an economic benefit of more than 5 million rubles.

A collective of scientists at Belorussian Technological Institute introduced at enterprises in nonferrous metallurgy a new technological scheme for the smelting, alloying, and modification of cast high-manganese steel with the application of plasma processes. In response to a request by USSR Mintsvetmet [Ministry of Nonferrous Metallurgy], that institution of higher learning created a plasma-induction smelting unit that is unique in world practice, and on its basis introduced a fundamentally new method of smelting manganous long-lasting steel. All the developments are protected by 30 originator's certificates for inventions. The economic benefit from the use of this technological scheme in 1984 alone came to 190,000 rubles.

One could give many more examples of the successful introduction at enterprises of the results of the scientific-research projects carried out by our republic's institutions of higher learning, but we would like to dwell on a few of the still unresolved problems in this area. One of them is the obvious underestimation of the importance of science at institutions of higher learning in the training of highly skilled specialists and in the acceleration of scientific-technical progress. Actually, a rather large volume of research is being executed in the higher school system, but the questions of allocating capital investments in the development of science and of assets for materials and equipment for scientific purposes have not yet been resolved. All this has been complicating the carrying out of research at a high level, keeping scientists away from the resolution of their immediate tasks, and reducing their labor productivity.

We often come up against serious difficulties when fulfilling research on the basis of economic contracts, since the procedure for carrying out that research not only fails to guarantee the introduction of the results into practice, but also sometimes leads to the inefficient use of state funds. The responsibility of the customer enterprises and the branch ministries and departments for the results of the scientific-research projects conducted on the basis of economic contracts has been reduced: they do not give any reports concerning the economic benefit resulting from those projects, and they can stop them temporarily at any moment, or refuse to issue a document concerning the introduction of the project or its economic benefit. It also occurs that

the enterprises, having signed such a document one day, will refuse the next day to approve it and they do not bear any serious responsibility for this. Obviously the time has come to include the economic benefit from the introduction of the results of the scientific-research projects on the basis of economic benefits into the plans for the enterprises and the branch ministries and departments.

Unlike most of the scientific-research institutes, the institutions of higher learning, as a rule, do not have either a collective of designers or their own production base at their disposal. Therefore the developments proposed by the institutions of higher learning "trip" on the threshold of introduction more frequently than the other developments do.

In order to increase the effectiveness of the use of the scientific potential of the institutions of higher learning, in addition to the creative participation of the scientists themselves, it is necessary to carry out organizational measures. In particular, it would be desirable for the ministries and departments to stipulate in the plans the experimental-industrial verification of the developments at the institutions of higher learning, allocating for that purpose definite limits of capacities, manpower, and materials. As for the introduction projects themselves, it would be simplest to conduct them at the experimental production entities of the branch institutes, which should be appropriately reinforced.

It would not be a bad idea if the ministries, lead institutes, or associations had small initiatory groups for maintaining contacts with the scientists at the institutions of higher learning. Such experience exists at USSR Minkhimprom [Ministry of the Chemical Industry] and Minpromsvyazi [Ministry of the Communications Equipment Industry]. Finally, it is necessary to have constant supervision, at the level of USSR Gosplan, USSR State Committee for Science and Technology, and USSR Minvuz, both of the rate of progress of the developments themselves and the rate of their introduction in the branches. It is also necessary to provide material incentives for the workers at the institutions of higher learning, enterprises, ministries, and departments for the successful and effective introduction of the results of the scientific-research projects.

In order to improve the administration of the research in the higher school system it is necessary to improve their provision with the normative and methodological materials that define the entire process of administration -- from the formation of the plan for the scientific-research projects to the introduction of their results.

The resolution of these problems will substantially ease the conditions for the carrying out of research at the institutions of higher learning and will increase the effectiveness and return on that research. But that does not mean that the institutions of higher learning in Belorussia do not have any other ways for resolving the tasks in this area. It is completely obvious that subsequently everything that science at the institutions of higher learning must provide must be done by the institutions of higher learning basically by means of the mobilization of their internal resources, as has been partially mentioned above.

First of all we will strive to create a system of administration of research that will be adequate for the new stage of development. Here we are only at the beginning of the path and we are still making little use of the capabilities of computer technology in the administration of the scientific-research projects.

We intend to continue to improve the system of administering activity in the area of inventions and patent-and-licensing activity. Special attention will be devoted to improving the introduction of the results of the research into the national economy. For that purpose we have already carried out the selection of the most important developments. For 12 of them, materials have been sent to BSSR Gosplan for the organization of an experimental-industrial verification in the branch republic ministries and departments. In addition, more than 40 developments have been sent by institutions of higher learning for introduction at the republic's enterprises in conformity with the "Science For Production" system of BSSR Gosplan. The system of monitoring the fulfillment of scientific-research projects, especially those that are included in programs at various levels, will be improved. It is planned to reinforce further the experimental-production base of the institutions of higher learning by relying upon funds provided by the customer. Contacts with production will be intensified. As early as the first quarter of 1985, two new ONIL were opened, and the question of creating several more laboratories of that kind is being considered at the branch ministries.

Thus, at BSSR Minvuz and its educational institutions, as a result of the successful fulfillment of the planned assignments and the socialist pledges for the first four year of the 11th Five-Year Plan, a solid base has been created for resolving the tasks of this year and the five-year plan as a whole, and for the further growth and increase in the effectiveness of science at institutions of higher learning, in order to meet the 27th CPSU Congress in a worthy manner.

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EDUCATION

HIGHER STANDARDS FOR TEACHER TRAINING IN ESSR NOTED

Tallinn KOMMUNIST ESTONII in Russian No 9, Sep 85 pp 48-52

[Article by R. Virkus, vice-chancellor of Tallinn Pedagogical Institute imeni E. Vil'de: "The School Reform and Teacher Training"]

[Text] The documents of the party and the government on the school reform define the role of the teacher in our society and the measures with respect to the perfection of training, the increase of professional qualifications and political self-education, the improvement of the conditions of work and everyday life, and in the end--with respect to the further growth of the social prestige of the teacher. In the basic directions of the school reform, renewed emphasis was given to the Leninist idea that the teacher of the people in our country must be raised so high as he never was, is and cannot be raised in bourgeois society.

As the basic task, the Communist Party advances before the teachers the sensible guidance of the cognitive activity of the students, the formation of a Marxist-Leninist world view and communist morality and on this basis--the training of the rising generation for a life full of vitality. The reform envisages a gradual transition to the instruction of children from age 6, which is in full agreement with the data of comparative pedagogics and the model of future education. This is attended by the growth of the social role of the teacher, who will influence the life arrangements and destinies of his pupils during a longer time period. The strengthening of the significance of the socio-cultural mission of the educator is directly connected with the requirements of social development. This gives rise to the logical conclusion: The growth of the needs of society brings about increased requirements with respect to ideological-political knowledge and convictions and with respect to the professional skill of the teacher.

In our country a system of teacher training has developed that guarantees the necessary number of teachers and educators for all types of schools: General education schools and vocational-technical schools, secondary specialized educational institutions, pre-school and adult education institutions. At present the training of teacher personnel is conducted by 481 pedagogical schools, 68 universities, and 200 pedagogical institutes. In addition, personnel for vocational-technical schools is trained by 67 industrial-pedagogical tekhnikums and the Sverdlovsk Industrial-Pedagogical Institute, established not long ago. Engineering and pedagogical faculties are already in operation in a number of

polytechnical and agricultural VUZ's of the country.

As is well known, in the ESSR teachers with higher education are turned out by Tartu State University and the Tallinn Pedagogical Institute imeni E. Vilde, music teachers receive their education in the Tallinn State Conservatory, and kindergarten teachers and workers with a secondary education are trained by three pedagogical schools--in Tallinn, Tartu and Rakvere.

On the Quantitative Training of Teachers and the Necessity of Its Increase

To obtain an idea of the key problems of the training of teaching personnel, it is necessary, first of all, to comment on its quantitative aspect.

The school reform proposes that solely teachers with higher education will work in the system of general and vocational-technical education. Although in the ESSR their number is growing with every year, nevertheless among the other republics it finds itself in the ranks of those lagging behind. The number of teachers with higher education in the 4th to the 11th grades of the general education school serves as a basis for comparison. In 1982, in terms of this indicator, the ESSR was in 13th place (we were followed by the LaSSR and the KaSSR), and a year later--in last place. If in our republic 87.4 percent of the teachers of the 4th to the 11th grades have higher education, in the UkSSR--97.9, in the LiSSR--96.3, in the RSFSR--96.1 and in the Moldavian SSR--94 percent. By comparison with other union republics, we have more teachers with secondary education (2.7 percent) working in the middle and upper classes of the general education school.

During the past decade, remarkable successes were attained in the matter of training teachers with higher education in all union republics, but there the development went more quickly than in our republic. The ESSR is in 11th place. The situation is relatively good in our republic with respect to the training of teachers of the beginning classes with higher education, which come to 46.2 percent. In terms of this indicator, the ESSR is in 9th place among the other republics, the highest indicators are in the GSSR (64.1 percent) and the UzSSR (56 percent).

An analysis of the educational level of our teachers indicates great fluctuations with respect to academic disciplines. The greatest need is for music teachers (of them 55.6 percent have higher education) and for teachers of labor training of the higher classes (67.5 percent with higher education). A shortage of teachers of beginning military training is also being experienced, as well as teachers of the Estonian language for schools using Russian as the language of instruction, teachers of the Russian language, mathematics, physical education, and other subjects.

Anxiety is being caused by the from year to year declining share of men among the teachers. Of the total number of teachers of the middle and upper classes, men constitute 11.5 percent, in the elementary grades there are only 25 men (1 percent). Men-directors head two-thirds of the secondary and a little more than half of the 8-year schools.

In the next few years, the need for pedagogical personnel with higher education will increase significantly. This is caused, in particular, by the fact that the generation of teachers, who began to work during the postwar years, has retired or will retire in the immediate future. They received their training at the Tallinn or Tartu teachers' institutes, and then continued their education by means of correspondence courses at Tartu State University or at the Tallinn Pedagogical Institute. At the present time, 28 percent of our teachers have reached retirement or pre-retirement age.

As is well known, the provisions of the school reform, which were examined and approved by the April (1984) Plenum of the CPSU Central Committee, envisage important changes in the content, methods and organization of education. The renewal of the curriculum, especially in connection with the enrollment of six-year-olds, as well as the development of a network of secondary vocational-technical schools call for changes in the training of teachers, proportional advances with respect to academic disciplines and expansion of the list of specialties (teachers of the fundamentals of family relations, the fundamentals of information science).

With the transition to the regular instruction of six-year-olds during the years ahead, there will be a sharp increase in the demand for teachers of the beginning classes, for example, in the 12th Five-Year Plan--by 600 persons. In large cities, especially in Tallinn and Tartu, there is a shortage of kindergarten educators. According to the school reform, the share of secondary vocational-technical schools will grow with every year. In 1990 more than one-third of the students of the senior level will be studying in them. This means that the number of secondary vocational-technical schools in the forthcoming five-year plan will almost double. Consequently, new personnel is needed. The task of increasing the level of labor training dictates the necessity of the pedagogical training of skilled craftsmen of the secondary vocational-technical school.

It is evident that, in the difficult conditions of the reorganization of the school, the present-day intuitive methods for predicting the demand for teaching personnel cannot be adequate. The Tallinn Pedagogical Institute imeni E. Vilde has concluded an agreement with the ESSR Agro-Industrial Association, the ESSR State Committee for Vocational and Technical Education, and the ESSR Ministry of Education, on the basis of which scientists and pedagogues are studying a dynamic model of the teachers in secondary education. The results of their research will make it possible to predict scientifically the demand for pedagogical personnel.

Along with the training of teachers, our VUZ is called upon to be concerned about the increase in the qualifications of school administrators and partly teachers (for example, teachers in tehnikums and Russian language teachers). With the new academic year, the training of students in the 3-month courses of the reserve of school administrators is also being placed on it. The skill improvement of the Komsomol staff workers of the schools will be organized in an analogous manner. Tartu State University plans--by means of the organization of special courses--to assist the training of teachers in secondary specialized educational institutions and the training of teachers of the fundamentals of information science.

The Completing of Students of the Pedagogical VUZ

In the formation of the student contingent of the Tallinn Pedagogical Institute, they proceed from the fact that those candidates should be accepted as students who want to become teachers. However, as research shows, by far not all those who are enrolling pursue such a goal: Many orient themselves toward a specialty, i. e., a discipline being taught, some are attracted by the possibility to continue, during their student time, sports pursuits to which they have become attracted, amateur talent activities, and fine arts. In some specialties, among the first-year students there is a total of only 20 percent of those who enrolled in the institute with the desire to become a teacher. Well-defined vocational orientation is observed only among students in the specialties of elementary teaching and pre-school education.

There are several reasons for such arrangements. In particular, this is a reflection of the fact that the Tallinn Pedagogical Institute is the only humanistic VUZ in the capital of the republic, where one can study, for example, philology, psychology, and the art disciplines; on the other hand, along with teachers, specialists for other spheres of life must also be trained. Thus, every year approximately 10 of 40-45 graduates of the faculty of physical education are placed at the disposition of the ESSR Sports Committee. The majority of them become sports workers, some of them coaches. A disorienting effect on the selection of a profession is also exerted by the existing rules of acceptance, where knowledge of the subject acts as the first criterion, and not the orientation toward the profession. A mathematical mechanism is operating--the sum total of the marks collected in the entrance examinations.

At the present time, the institute is taking comprehensive measures for the formation of a suitable student contingent. In so doing, the following goals are being pursued:

- 1) To raise the authority of the institute;
- 2) to increase the prestige of the teaching profession;
- 3) to improve the information of students about the profession of the teacher and the possibilities for acquiring it;
- 4) to strengthen pedagogical vocational orientation in the schools;
- 5) to perfect the procedure for acceptance into the VUZ.

Various forms are being utilized for the attainment of these goals. In order to complete the contingent of students more successfully, an agreement has been concluded with the Khiumaaskiy Rayon and the Tallinn city departments of education, on the basis of which they obligate themselves to send graduates of their schools for study in the VUZ in accordance with the requirements for teachers of various sorts of specialties. The institute obligates itself to provide them with the necessary number of teachers by agreement with the planning organs. On the initiative of the Tallinn Party Gorkom and the city department of education, the agreement is constantly being perfected. Not long ago, a meeting took place of the graduates of the institute living in the capital and the directors of public education. A club for future teachers is in operation,

which was organized on the initiative of the Leninskiy Party Raykom of the city of Tallinn. Here lectures and discussions on questions of pedagogy and psychology are organized for pupils of secondary schools, as well as meetings with teachers of the institute. And the administrators of the Khiyumaaskiy Party Raykom and Rayispolkom met in the institute with students who are natives of the island.

An agreement on many-sided cooperation links the Tallinn Pedagogical Institute with the Rakvereskiy Rayon. Along with political work among the masses, it gives a lot of attention to vocational orientation, including orientation for the acquisition of the teaching profession, as well as direct assistance to schools (the administration of special classes, assistance in methodological work, etc.). The institute has developed regular contacts with the State Committee for Vocational and Technical Education, with whose direct participation one of the groups in the specialty of the general technical disciplines (masters of vocational-technical schools), with all students of the group being scholarship holders of the system mentioned. In preparatory courses, they receive intensified training in general subjects; its payment is borne by the committee. The administrators of the State Committee for Vocational and Technical Education regularly appear before students of this specialty.

The "Days of the Teacher", which are systematically conducted by the institute in cities and rayons are conducive to the completing of the student contingent. During the past school year, they were conducted for teachers of Pyarnu and Pyarnuskiy Rayon and the Leninskiy Rayon of Tallinn. Leading teachers of the institute gave speeches on social science and pedagogical subjects at specially organized days for pedagogues of agricultural tekhnikums and vocational-technical schools, at a plenary session and in sections (about 10 sections). As a rule, a concert of amateur talent activities by students and the sale of pedagogical literature are organized.

Students of the faculty for skill improvement of school administrators contribute their mite to the propagation of the teaching profession. Our newspaper PEDAGOOGILINE INSTITUUT (PEDAGOGICHESKIY INSTITUT) has become popular both among students and [institute] teachers and teachers of the republic, first of all thanks to the illumination of problems connected with the work of the teacher and the acquaintance with the conditions of study in the VUZ.

Also conducive to the recruitment of students is the direct popularization of the pedagogical institute, which includes the conduct of open door days, the publication of special issues of our newspaper, the appearances of student agitation brigades in the schools, and television and radio broadcasts on the activity of the institute. Of interest to the departments of public education and schools was the extra-competition admission, on the basis of which more than 100 young people will be able to enroll in the institute this year. For the schools, this signifies an obligation to work with the senior pupils who have pedagogical inclinations and to orient them toward the acquisition of a pedagogical education. Thereby the school takes upon itself a share of the responsibility for the formation of the future teacher.

The formation of the student contingent of the Tallinn Pedagogical Institute

is significantly facilitated by circumstances connected with the school reform, especially with the increase of the wages of teachers. The general competition for entry into the institute is high--in terms of this indicator, the Tallinn Pedagogical Institute occupies second place after the State Art Institute of the ESSR. But there are difficulties with the completing of the groups in such specialties as beginning military training and physical education, Russian language and mathematics.

The transfer of the center of gravity of vocational orientation to the secondary school and the secondary specialized education institution (including to the secondary vocational-technical school) makes it possible to realize more effectively two almost acknowledged ideas: 1) Every school should itself take care of the reproduction of teaching personnel and 2) in the student contingent of the pedagogical VUZ, at least two-thirds must be those who have the prerequisites for pedagogical work and the desire to become teachers (the remaining third could be reoriented in the VUZ).

About the Perfection of the Educational Process

In the formation of the future teacher, the level of educational work in the pedagogical VUZ is of decisive significance. When we organize it we obtain:

- 1) Pedagogical culture and the creation of a pedagogical environment;
- 2) the maximum professionalization of the educational process;
- 3) the many-sidedness of extra-curricular activity and its general cultural, including pedagogical, direction.

If up to now the training of the teacher-specialist was accented in the organization of the educational process, now greater attention is being given to the training of the teacher-educator. You see, the reorganized school is in need of a teacher who is better prepared for educational activity as a class administrator and a mentor in pioneer and Komsomol work. To this end, corrections in the curricula and programs are being introduced, pedagogical practice is being perfected, and non-lecture activity is being intensified. The strategy for the training of students in this direction was developed by the administration and the party bureau of the Tallinn Pedagogical Institute jointly with the Central Committee of the Komsomol of Estonia.

With the introduction of changes in the curricula and programs, special stress is laid on the pedagogical-psychological disciplines, including the methodology of communist education. The system of specialized and selective courses (the methodology of educational work, the foundations of pedagogy, the psychology of relations, etc.) is oriented toward educational work.

The educational institutions of our republic require specialists in educational work who would be able to work as educators in dormitories and school groups of an extended day, senior pioneer leaders or organizers of work outside the class and school, staff Komsomol workers in secondary vocational-technical schools and tekhnikums, urban and rayon committees of the Komsomol, and in

career advice offices. The training of these specialists began in the Tallinn Pedagogical Institute in 1978, with the specialty "elementary teaching" being supplemented by the specialty "educational work" with the simultaneous prolongation of the period of study by a year. There have already been two graduates in the new specialty, with the majority of those having it doing precisely educational work. Good testimonials about their activity have been received, and the graduates are also satisfied with their specialty. The experience that has been acquired leads to the idea of the expediency of the combination of the additional specialty "educational work" with still another basic specialty. This would make it possible to graduate more teachers who have received more solid training for work with pioneers and Komsomol members, and with six-year old children in the sphere of military-patriotic education and vocational orientation.

The perfection of pedagogical practice presupposes the strengthening of the relations of the students with the school. In addition to two prolonged practical work experiences in school and practical experience in a pioneer camp, students are now obligated, beginning with the second semester, to take part one day a week in the solution of various educational tasks in a school. The reformed school naturally is conducive to the improvement of the training of the teacher, but at the same time presents the participating organizations with difficult demands.

In the process of the training of personnel in the pedagogical VUZ, a significant role is assigned to extra-curricular activity, which, on the one hand, makes it possible to study a specialty more intensively, and, on the other--is conducive to the increase of the general cultural level and the formation of an active life position of the students. In this sphere, the institute has certain achievements, but nevertheless the majority of the students are still not yet encompassed by energetic activity. The organs of student self-government--the institute committee of the Komsomol and its bureau, the student trade union committee, the board of the student scientific society, the sports club and the club for amateur talent activities--act as the basic organizer of extra-curricular activity. Our Komsomol leaders independently solve many important questions of the life of the institute: They organize social and pedagogical practice and the Lenin examination, days of friendship of the nations, and the Eduard Vilde Days. In the institute they are coping comparatively successfully with the administration of the work of the detachments of the Estonian student construction brigade. However, the influence of the Komsomol organization in the various faculties and in the educational groups is not identical. The trade union organization is giving special attention to the student dormitories.

The faculty of social specialties was successful: During the past year, based on the results of its work, we were awarded second place among the pedagogical institutes of our country. During the current year, 26 circles based on specialties and interests are in operation.

The school reform and the tasks of the perfection of teacher training that emanate from it are constantly in the center of attention of the party organization of the Tallinn Pedagogical Institute and its bureau.

Right away after the publication of the appropriate documents in the press, a meeting of communists took place, which discussed the role of the institute in the realization of the reform of the school and adopted a special plan of measures. In May of the current year, the first results of the work that has been done were summed up at a meeting of the party organization; moreover, for the further successful realization of the decisions of the April (1984) Plenum of the CPSU Central Committee, the meeting obligated the vice-chancellor's office to prepare a list of the specialties which are taught in the VUZ. In the interest of increasing the level of educational work, it was acknowledged as necessary to create a unified cycle of pedagogical and psychological disciplines for all pedagogical specialties and to pay greater attention to the integration of interrelated subjects. With a view to providing a further supply of scientists and pedagogues, it was decided to apply for the opening of post-graduate study at the Tallinn Pedagogical Institute.

During the period between the mentioned party meetings, the party bureau discussed the state of training of the teachers of Russian in the institute. The question was carefully analyzed with the participation of teachers of Tartu State University. A number of positive changes in the teaching of this specialty were noted. During recent years there has been an increase in the scientific potential of the department, its links with Tartu State University and with the VUZ's of Moscow and Leningrad have been strengthened, and the teachers are trying to find new possibilities and methods of perfecting the educational process. Students studying the Russian language are achieving remarkable results in the all-union olympics for this subject.

An important shortcoming is the relatively modest methodological training of the teachers of Russian. The work of the corresponding study room is not satisfactory, course work on methodology is not practiced.

As is apparent from what has been said above, the institute party organization is systematically fulfilling the decisions of the April (1984) Plenum of the CPSU Central Committee. In the name of this, a system for the selection of candidates for students is being perfected, new curricula and programs are being elaborated, and educational and methodological complexes are being composed. In the course of the first year of the realization of the school reform, the relations of the institute with general education schools and vocational-technical schools were strengthened. It would be desirable for school party organizations to include on the agenda of their meetings questions of the training of pedagogical personnel, for the successful training of a new generation of teachers is possible only with the close cooperation of all interested organizations.

The school reform represents an extensive program, whose realization is calculated for a long period of time. Time places before the school and the organs of public education ever new tasks, and the key figure in their solution is the teacher. This most noble and most difficult profession demands from the individual, who dedicates his life to it, constant creativity, tireless work of thought, enormous sincere generosity and love for children, and unlimited loyalty to the cause. On the training, skill and professional mastery of the teacher depends the quality aspect of the realization of the school reform. The training of the teacher puts an imprint on the instruction and education of more than one generation, and for this reason it must be approached not only with care and attention, but also with a growing feeling of perspective.

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EDUCATION

RSFSR EDUCATION MINISTER ON FIRST YEAR OF SCHOOL REFORM

Moscow SOVETSKAYA ROSSIYA in Russian 20 Jul 85 p 1

[Article by G.P. Veselov, RSFSR Minister of Education: "The First Lessons of Reform"]

[Text] A little more than a year has passed since the day the April (1984) Plenum of the CPSU Central Committee adopted the basic directions for the reform of general education and vocational schools. Even though the space of time is not a large one, several conclusions already can be made. Reform has become a matter of primary importance for many pedagogical collectives; several interesting initiatives and undertakings have developed and changes are apparent in the work of many teachers.

At the same time, the following fact cannot help but be cause for alarm: they have not yet been successful in reaching a major turning point in the improvement of the quality of teaching--the school's most important task. This is manifested primarily by the attitude of a number of teachers toward the educational process. I will cite a specific example. Checks conducted by the ministry have shown that not all the younger schoolchildren in Kostroma and Orlov Oblasts are able to read, write and figure well. Some teachers are not sufficiently prepared for their lessons; here and there, as before, such subjects as music, fine arts and physical culture are treated with disdain. A great deal is still being done as it was done before in the schools--lectures, seminars, consultations or practical work are rarely presented. Very few open lessons are given, meaning that an opportunity for efficiently acquainting teachers with didactic innovations is missed. Satisfaction with final examinations was far from universal--they indicated poor preparation on the part of some children in literature, history, physics and mathematics. According to data from the Scientific Research Institute for Schools of the RSFSR Ministry of Education, 13-17 percent of students leave mathematics and physics classes without having mastered the educational material. This is a warning signal and it obliges all of us, especially teachers and school administrators, to look differently at the status of the educational process.

It would be unfair to blame the teachers alone for these shortcomings. The imperfection of programs and textbooks is undermining us. For clarity, let us examine a specific example--physics. There are 316 paragraphs in the textbooks for grades 8-10, but only 24 of them mention direct yields to practice. The authors did not set goals for themselves of making the

correlation between life and theory as graphic as possible. Students are given around 400 problems to solve, but scarcely a third of them have any practical content. It would appear that the USSR Academy of Pedagogical Sciences could solve the problem of developing new physics textbooks more quickly, especially since the party's demand for accelerating scientific and technological progress has been put on the agenda.

One of the basic directions of the reform is an earlier start for instruction in school. This is not a simple problem. We only have one year left to start entering children in school at the age of six. In all oblasts, krais and autonomous republics there are estimates and plans for this operation, which will be carried out before 1990. But even now this upsets the complacency of certain administrators who do not feel that it is necessary to be concerned about the development of necessary conditions; you see, the children need not only a classroom but a place to sleep and to play games. The ministry feels that the public education agencies need to more intensely and steadfastly present the Soviets of Peoples Deputies with the question of building additions to the general education schools and to better use existing preparatory classes for exchanging experience in working with six-year olds. And here the institutes for continuing education of teachers and methodological laboratories of the city and rayon public education departments could show more concern and organization: to study, propagandize and disseminate the methodological findings of the best teachers working in the elementary grades.

In some places here and there, and SOVETSKAYA ROSSIYA was correct about this, there was a desire to distinguish oneself, and without having prepared the required material base, it was decided at whatever cost to exceed the original plans and open as many preparatory groups of six-year olds as possible. The result? Sad--the children are overworked, the parents dissatisfied and in some places lack of trust toward a good and necessary thing has developed. Is this not too great a price to pay for the pleasure of flaunting glowing reports?

A very important part of a school's entire educational and indoctrinational work is vocational training and education. Today more than 40,000 base enterprises are helping us to develop manual labor study centers in the elementary grades, as well as production workshops, instructional shops, and sections directly in production. Suffice it to say that during the past year more than 130,000 student work places have been prepared at enterprises, on construction sites and in transportation organizations. This work was done especially actively in Moscow, Sverdlovsk, Saratov, Omsk and Chelyabinsk.

The 7th All-Russian Meeting of Representatives of Student Production Brigades took place a couple of days ago in Engel'skiy Rayon of Saratov Oblast. They were actually unique educational shops, where young people prepared for work in agriculture. The children were acquainted with the newest achievements in science and in practice and the level of their technical literacy was raised. It is noteworthy that the meeting

participants showed good understanding of the state of affairs in their own kolkhozes and sovkhoses. At the same time, the meeting also helped to expose our failures: some children proved to be poorly prepared and did not know how to organize their workplace; their teachers had not taught them to economize. All of this indicates that the administrators of the farms and base enterprises are paying little attention to the quality of work and vocational instruction. The structure of the student production brigades does not always meet the requirements of reform. They operate on a seasonal and not a year-long basis, and they do not contain many livestock, construction, land reclamation, or vegetable farming links. A portion of the brigades have a weak material base, specifically obsolete equipment on which the senior pupils must learn. These reproaches can be addressed to the administrators of the farms and public education departments of Moscow and Ryazan Oblasts and Khabarovsk Kray. The chief principle of labor indoctrination is direct participation of pupils in socially useful productive labor. It must be provided in every school--now, during the summer and during the coming school year.

It is very important that work on the technological creativity of young people be developed more extensively in the schools. Unfortunately, industrial enterprises, construction and transport organizations, sovkhoses and kolkhozes and trade organizations pay little attention to this question. Can't we use production scraps wisely and package them up and send them to the schools so that children can learn to create and make useful things with their own hands? Our trade does not worry much about having the necessary materials for technological creativity in the stores. These shortcomings are observed literally in every region.

In accordance with the reform, a great deal has to be changed in the organization of children's leisure time. During non-class time, dozens of circles, sections and clubs according to interests are in operation in many schools of Belgorod and Voronezh Oblasts and of Moscow and teachers are actively assisted in this by scientific and cultural institutions and industrial enterprises. This cannot help but have an effect on the nurturing of conscious discipline and the all-around development of personality. Nonetheless, it must be stated that in most schools this work, which is so necessary, is not organized as it should be.

Not long ago the Ministry of Education sent special brigades to Arkhangelsk and Kirov Oblasts to help the school become centers of active indoctrinational work with adolescents in the microregion. What did we encounter when we got there? It turned out there many directors formally admitting the need for such work, were not actually using the abundant resources existing not only in the school but outside of it. Is it surprising that there is a high level of law-breaking in these very oblasts? And the public education departments showed utter weakness of will, not having demanded of school administrators that they give real attention to indoctrinational work with students during non-class time.

At the end of August, teacher conferences will take place throughout the entire republic. At them there should be a searching discussion as to how every pedagogical collective is transforming the conditions of the reform into life. It is very important that there be discussion not just about the successes and what has been attained, but first of all about the tasks that we have to resolve.

Of course, the most important task for the Soviet teaching profession is still that of improving the quality of the students' knowledge. A great deal here depends on the personal position of each teacher: if he will wait for explanations and instructions from above and hope that someone from the outside will investigate his domain and prompt him in how to deal with the subject better and find the way to a child's heart--he must not expect rapid changes. Yes, the teacher needs help, and no one can take away responsibility from the institutes for continuing teacher education--they must more actively research, study and disseminate what is new. I repeat, however, that our chief hope is a clever, talented and inquisitive teacher.

There is not much time left until the first of September. Thousands of children will begin the school year in new, spacious classrooms. But the long-awaited housewarmings cannot take place in a number of villages and cities in the Tuva ASSR, Altay and Krasnodar Krays, and Bryansk, Lipetsk, Novgorod, Orenburg, Sakhalin and Chita Oblasts. The annual plan for school construction capital investments was filled by less than 20 percent in these places. The USSR Ministry of the Petroleum Industry, the USSR Ministry of Tractor and Agricultural Machine Building, the USSR Ministry of the Gas Industry and the RSFSR Ministry of the Fruit and Vegetable Industry are building school buildings more poorly this year.

The school reform is taking the first steps. It demands each of us to show more creativity and initiative in our work and to do away with smugness and complacency. At the meeting of the Leningrad party organization aktiv, Mikhail Sergeyevich Gorbachev said: "Everyone needs to reorganize--everyone. I would even say from worker to minister.." These words relate directly to those of us who work in the educational system.

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EDUCATION

DEFICIT OF TEXTBOOKS BLAMED ON POOR PLANNING

Moscow SOVETSKAYA KULTURA in Russian 21 Nov 85

[Article by Ye. Seslavina: "An Edition Sized with Room for Growth." Boldface headings in original reproduced in all-capital letters.]

[Text] School textbooks have been made free of charge in our nation. This means the planning of the size of editions must be even more accurate. However, planning is frequently based on "eyeballing." The result is millions of books which are never touched by a pupil's hand.

In January 1978, the CPSU and USSR Council of Ministers published a decree entitled "On the conversion to free textbooks for pupils in non-specialized schools." The state assumed all the expenses of providing children with textbooks. At the same time the textbooks became the property of the school libraries. Now each book, which is passed down from older pupils to younger ones, must be in service not just for one, but for four years. Many fewer textbooks are now needed. In but a single allocation cycle, the number of copies printed in the country was reduced by 307.7 million! Millions of literary, children's and reference books were printed on the paper thus saved.

AN EXTRA SUPPLY CAN DO NO HARM

Not only schoolchildren, but their parents as well, must now learn to take care of textbooks, which have now become public property, and get used to the fact that grades will be given for the condition of books. In the initial period after free textbooks were introduced, the national and republic ministries of education and publishing houses received requests from citizens wishing to acquire a set for their personal use. There were also letters concerning shortages of the new books.

Now, such letters are no longer received. On the other hand, a new kind of letter has made its appearance.

In the office of the deputy director of the "Prosveshcheniye" [Education] Publishing House, A.I. Barsukov, I leafed through a thick file of letters on official forms. These were "Documents for obtaining reimbursement for losses due to write-offs" of textbooks.

The Chitinsk Oblast Consumer's Union is writing off 300 eighth grade and 238 ninth grade algebra textbooks published in 1978. The Smolensk Oblast Book Trade Organization is writing off 1,132 copies of B. Bukhovtsev's ninth grade physics textbook. Similar documents have been received from Sverdlovsk, Azerbaijan, Krasnodar, Belorussia and Kirgizia. These textbooks were written off last summer as out of date.

How did it happen that the deficit turned into a surplus and that this property turned out to be a loss?

Here are the "reasons" cited by the director of Yerevan school No. 38, G.L. Bagdasaryan (who didn't once use the ninth and tenth grade German textbook which is written off here as out of date in accordance with an order of the USSR Goskomizdat [State Publishing Committee]):

"Previously, 'Nemetskiy Yazyk' (The German Language) for the ninth and tenth grades was published in a single volume. Now there are two separate books. On receiving the new edition, we were obliged to write off a portion of the textbooks..."

The answer is vague, a clear attempt [by the writer] to protect himself against possible criticism. And, very likely, the most interesting aspect here is what the director doesn't mention: the school itself orders a specific number of books. When the order [for the new books] was put in, the [old] textbooks were, naturally, on hand. And they had already grown obsolete in the school reserve stocks, and storerooms. The same can be said of all the book dealers and cooperative organizations mentioned above as submitting documents for write offs.

In Smolensk, for example, they had laid in a reserve supply of approximately enough physics texts for 25 classes! What for? After all, a textbook is only of use to a student. The demand for this type of literature can be predicted accurately. But accurate predictions, alas, are frequently supplanted by the "housewifely" habit of laying in a reserve supply. The extent of these reserves was disclosed by the USSR Goskomizdat order on writing off obsolete text books. Of course, the full extent of these reserves has not nearly been revealed.

In the years since textbook became free, never once was a title by title inventory made in our country. We do not know how many books, which technically have served their time, but are still far from decrepit, are being kept in the schools. We do not know how many extra textbooks ordered for "a rainy day," are gathering dust in the school libraries, stores and book storerooms.

An audit made by the Committee of People's Control a year and a half or two years ago in the republics of Central Asia, the Trans-Caucasian region and three oblasts in the RSFSR allows us to guess at the dimensions of these stores of stale goods. Reserves consisting of 19.5 million textbooks published in previous years were found. Eight million of these had not been used even once.

In the book depositories, in the city and village stores 5.2 million more books were lying unused. These had been ordered by the [local] educational authorities, but had not been purchased by the schools. The cost of these books, which had not once been used by a pupil, was four million rubles.

It would seem that these figures would make the USSR Ministry of Education take serious emergency measures. Indeed, there was a joint meeting of the boards of the Ministry and the Goskomizdat. In particular, it was decided at this meeting that during the 1984-85 academic year, there would be an inventory of the stocks of school libraries (and there are 145,000 of these in the nation), to establish the number of books suitable for further use. So as to include the books which had piled up in the stores, provisions were made to include these in the title by title inventory. A year passed. The educational authorities and the book dealers showed touching unanimity -- the reserve supplies of books remained "sealed with seven seals."

PLUS OR MINUS A MILLION

Looking through the write-off documents I remembered a long past incident, which various people had told me almost as if it were a joke. When state allocation of textbooks was a very new thing, they decided in Karakalpakiya that the new system meant that each child was to have two sets of textbooks, one for home and one for school. And they requested the appropriate numbers of copies.

This is just a curiosity, but it demonstrates once more the important role of the monitoring agencies which draft the orders and, ultimately, determine the number of copies of textbooks printed.

"When they collect the [book] orders and merge them into a single order for a region," says the deputy director of the division on textbook allocation of the USSR Ministry of Education, K.V. Agafonova, "the republic ministries of education and the oblast educational authorities must without fail check the orders against the statistical data on the population and correct them accordingly. Unfortunately, they do not always do this and we are compelled to make changes in plans for the issuing of textbooks which have already been approved. The USSR Ministry of Finance and people's control have also brought this to our attention. We are struggling assiduously against this phenomenon.

Speaking frankly, the nature of struggle has remained unclear. Corrections are frequent, as they have always been. Nevertheless, the ordering organization very rarely finds time to explain what precisely were the objective reasons giving rise to a request to increase the number of textbooks (and the majority of claims do precisely this).

Eleven times over the past year, the RSFSR Ministry of Education issued requests to make corrections in orders. Only one of these cited cause -- the basement of a depository had flooded. There exists a reserve supply of textbooks for cases like these. But if the correction is more major, than the publishing house have to be asked to change the size of an edition.

On 28 May of this year, the USSR State Committee on Vocational and Technical Education asked for an augmentation of their order in the amount of several thousand manuals for the 1985-86 academic year -- new vocational and technical schools were being opened. According to the plan all the books should have been ready and completely distributed by 1 July. This means that some printing-house had to disrupt its schedule to get them printed. The children got their textbooks. However, the decision to open the schools must have been made long before the end of May.

And here is another document addressed to the "Prosveshcheniye" Publishing House: "The RSFSR Ministry of Education urgently requests that you print additional copies of the following textbooks for the specialized vocational and technical schools of the RSFSR: Russian language handbooks -- 44,000 copies; collection of physics problems -- 146,000 copies; "Contemporary History" -- 100,000...."

They are talking about the 1986-87 academic year and the "urgent request" is dated 1 April of this year, so that it is no easy matter to fulfill it. Neither the raw materials nor the facilities for such large supplementary printings were provided in the plan. Such letters are the clearest illustration of the kind of situation which has taken shape with regard to the formulation of rationally based [book] orders. And the rebuttal that this was done by another department, in essence, changes nothing. It is another department, but the children are the same as the ones in school. How is it possible that they were not counted? And what then of "checking against statistical data on the population"?

Here is another example. Efficiently responding to current needs, the "Prosveshcheniye" publishing house issued a textbook on information sciences. The educational workers collected the orders -- slightly over three million. They printed 3.3 million. "The edition had not yet been completely distributed," says the head of the department of literature of the USSR Goskomizdat, V.N. Munina, "when we began to get letters with requests for an additional printing. It turned out that a million more were needed."

If, the specific cause for this disruption of the economic process were to be established for each case where a major correction was made [in a book order], I think the situation would change drastically.

WALLET OR VUZ?

Last spring in a graduation assembly, as usual, diplomas were handed out, the students were wished well on their journey of life; the graduates and their parents expressed gratitude. It was a sad and touching ceremony. One incident marred it slightly -- the mother of a prize winning honors student expressed special appreciation to the school administration for allowing student taking vuz exams to take their textbooks home for a mere 25 ruble deposit.

Remembering this episode, the graduates were very amused. But I wanted to know how often the school acts the part of a pawnbroker. Of twenty students taking entrance exams for Moscow State University, only one (!) girl from the

Ryazan Oblast said that they were allowed to take out books to preparing for the university on their word alone. The students from Moscow had to leave deposits of passports, watches, money, and some even left works of literature, as many volumes as they took textbooks. Those who came to Moscow from other cities, basically had to make do with notes and study aids -- they had to give back their textbooks before receiving their diplomas. There's no reason to be surprised: the librarians required deposits contrary to the instruction of the USSR Ministry of Education, since they did not trust the higher consciousness of their charges. How were they to know? Suddenly, an unsuccessful applicant might decide to "lose" some books, and there wouldn't be enough for future tenth graders.

But not just students fresh from school enter the vuzes. Among the applicants are those who have served in the Army and people who have worked in the economy. What will happen to them if textbooks become difficult to obtain?

This problem could have been eliminated if thought had been given to it at the right time and wise use had been made of those "superfluous" textbooks which are now lying like dead weights in the book stores and school libraries.

Among the most important tasks posed by the plan for Major Directions to be Taken in the Economic and Social Development of the USSR for 1986-1990 and up to 2000, there is this one: "To improve the rationality of planning. To enhance its effects in accelerating the social and economic development of the nation."

Current practice in drafting an order and determining the size of a printing, as well as deficiencies in planning, for the time being, are at variance with this goal. Many organizational issues, in addition, of course, to attitudes, will have to be re-examined, so that the huge stock of school textbooks can be put to rational and thrifty use.

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DEMOGRAPHY

EFFECT OF BIRTH RATE ON CENTRAL ASIAN LABOR RESOURCES

Ashkhabad IZVESTIYA AKADEMII NAUK TURKMENSKOY SSR: SERIYA OSHCHESTVENNYKH
NAUK in Russian No 2, 1985 pp 80-82

[Article by Sh. Kadyrov, Division of Philosophy and Law, Turkmen Academy of Sciences: "Issues Relating to Improvement of Demographic Policy in the Central Asian Region of the USSR"; received 11 June 1984]

[Text] The concern of the 26th CPSU Congress for the family, young couples and working mothers has defined the major direction to be taken by demographic policy.¹ A supplementary program of practical measures was adopted with the purpose of creating "the most favorable conditions for the growth of the population and the upbringing of the rising generation."² The Congress emphasized the need to take into account the unique conditions in the regions and union republics.³ This is reflected in the fact that the measures to strengthen and develop the family will be introduced in a phased sequence determined by the severity of social-demographic problems in the different areas. These measures will be implemented first in the regions of the North, Siberia, the Far East and the European portions of the nation and last in the Central Asian Region.

At the present time, the main indicator testifying to significant regional differences in population reproduction is the birth rate. The majority of the planned and presently implemented measures in Soviet demographic policy are directed at social processes related to birth rate. At the level of the family, these measures call for extensive promotion of the ideal of the middle-sized family among married couples and for the creation of conditions conducive to the achievement of this ideal. Demographic policy is not limited to this goal. As is the case for policy in general, in our view, it is important to utilize the existing arsenal of measures in accordance with ongoing processes and their unique social and historical features so as to achieve not only strategic, but tactical goals and aims as well. With regard to the goal of the middle-sized family, modern demographic policy measures in the European portion of the USSR, where the small family predominates, would be directed toward achieving an increase in the birth rate. However, one should not rule out the possibility that the objective historical decrease in the birth rate and the dying out of large families in the Central Asian region could be accelerated by the new demographic policy measures, redirecting the younger generation toward the moderate sized family in lieu of the traditional extended family. At the same time, a stable tendency toward an increasing birth rate has still not been established in the European portion of our nation, particularly in the cities.

When this issue is viewed from the standpoint of the the fact that the large families of Central Asia partially compensate for the negative consequences of too few children being born in the European region of the USSR, then a decrease in the birth rate of Central Asia cannot be acknowledged unconditionally as a demographically progressive process. Thus, as long as the European portion of the country does not demonstrate a definite shift toward an increased birth rate, demographic policy measures in Central Asia must be directed toward keeping the existing decrease in the birth rate smooth and gradual. This will make it possible to develop effective measures for terminating the decrease in the birth rate at the level of the middle-sized family. In the near future, the rate of decrease in the birth rate in Central Asia will be substantially faster than that of other oblasts and republics of the nation; thus, the phased implementation of demographic policy measures must be acknowledged to be inadequate for solving regional population problems.

Let us turn to the question of monetary payments made to families by the state. Analysis of this social policy measure has allowed us to identify two types of monetary payment used to strengthen and develop the family. The first of these is the subsidy, the payment of which is intended to maintain the mean per capita income of the members of the family. With the appearance and increase of children, families gain the right to a subsidy which fulfills this demographic function. The majority of families with four or more children receive such subsidies. The second type of monetary payment is the bonus (a term introduced by V.A. Borisov), which differs from the subsidy in that it is paid upon the birth of a child in a family regardless of the parents' financial position. Thus, not every subsidy is a bonus, but every bonus can fulfill the role of a subsidy. The functions of the subsidy is to help and support, while the bonus, in addition to these functions, is meant to stimulate the birth rate.

At the present stage of social democratic development in the Central Asian region, the need for encouraging the birth of the first, second and third child has not yet arisen. The results of sociological field studies we have performed demonstrate that urban and rural Turkmen continue to place a high value on children, with the majority desiring to have more than three, no matter what the circumstances. At the same time, the newly amended payment to mothers primarily encourages the birth of one to three children (the bonus paid the family for the fourth and fifth child is less than that for the second and third child). This approach does not take sufficient account of the demographic characteristics of Central Asia.

In Central Asia, the bonus now paid at the birth of the first three children may, without detrimental consequences, be attached instead to the birth of the third through fifth child. This would not only increase the effectiveness of the measure, but would also lead to a substantial improvement in the well-being of the larger family, strengthening it as an ideal in the mind of local inhabitants, which would be consistent with the goal of smoothly and gradually decreasing the birth rate in Central Asia. "When one is dealing with human beings," notes the CPSU Central Committee in its April (1984) Plenary Session, "Particularly, if children are involved, one cannot plan everything out in advance. Life will not fail to make corrections in whatever drafts or plans

we make, and this is no cause for alarm. What is important is not to lose sight of our strategic goal, the development of a person who is mature and healthy in all respects." ⁴ Under the watchful eye of the government and society, the best way for this process to occur is in the context of the extended family.

At the stage of mature socialism, as in earlier periods in the history of Soviet society, the major principle according to which goods are distributed is in return for labor. In spite of the importance of the family with several children to demographic development, total maintenance of such families by society is not consistent with the economic, social and cultural interests and capabilities of our society. The programmatic aim of demographic policy -- that the middle-sized family should live better in all respects than the small family, and no worse than the large family -- can be achieved only if women with three or four children are able to participate in national production on a schedule which is convenient to them.

Many of the necessary conditions for extensive adoption of part time labor in enterprises with predominantly female employees already exist in Central Asia. Central Asia traditionally specializes in the production of agricultural raw materials for light industry, the enterprises of which, unfortunately, are still far from being kolkhozes and sovkhozes. The desire to have many children accompanied by frequent births, and, thus, by a growth in the number of women who want to work less than full time, eliminates the problem of finding workers to fill in the brigades of working mothers. Finally, it is of no little importance that when the flow of workers from outside of the region ceases, the major source of workers to fill the needs of the enterprises will be the indigenous population. Production managers must recognize the economic and demographic expediency of introducing part time work schedules for working mothers. As was noted at the April (1984) Plenary Session of the CPSU Central Committee, "We shall judge the success of a manager's work not only on the basis of whether he meets plan indicators and contract commitments completely and on time, but also on the basis of his practical efforts to improve the working and living conditions of his workers".⁵ Under the conditions which have existed previously, full time employment of working mothers, has, on the one hand, led to an uncontrolled decrease in family-orientation and thus to a precipitous drop in the birthrate, and, on the other hand, to a continuation, and frequently even an increase, of the difficulties involved in effective utilization of the female labor force in our region.

Corrective measures are also required in the activities of the mass media which are charged with producing propaganda in favor of the ideals of demographic policy, and facilitating the timely achievement of the tactical and strategic goals of this policy. The passivity of the media in this enterprise results from the mistaken and outmoded idea that there is no problem in Central Asia, with its families of many children, and that such families, considered to be an Uzbek, Tadzhik and Turkmen national tradition, are an inherent attribute of these republics. Such notions are in no way borne out by modern theory or by reality. The mass media and propaganda organs not only have the responsibility of solving problems after they arise, but also of preventing them from arising. In this regard it is beyond comprehension that in Turkestan, where, as in the other republics of Soviet

Central Asia, the climate has led the majority of the population to live and work in a traditional extended family, there is not one motion picture, major work of literature, television or radio series which discusses the advantages and difficulties of rearing such a family, its role in social demographic development, and in the rearing of the younger generation and the creation of the new member of society.

It is essential that a centralized organ be created to coordinate and monitor the implementation of demographic policy measures, with due regard for the specific features of population development in our region. This issue has been raised and discussed many times in Soviet sociological and demographic literature ("Ministry of the Family"). Probably, in order to deal with this question effectively, it will be important to synthesize the results of experience acquired by committees of the higher organs of legislative power in the republics of Central Asia, their subdivisions concerned with the working and living conditions of working women and by the organs concerned with motherhood and childhood. The April (1984) Plenary Session of the CPSU Central Committee, where the performance of the Soviets of People's Deputies was subjected to detailed analysis, noted the contradiction between "the unlimited potential of the Soviets and what they have been used for in actuality"⁶. Thus, along with the development of scientifically justified demographic policy measures directed at the family, the problem also arises of coordinating the activity of various organizations, institutions and departments for the effective implementation of the demographic policy of the Soviets of People's Deputies.

FOOTNOTES

1. "Materialy XXVI syezda KPSS" [Materials on the 26th CPSU Congress], Moscow: Politizdat, 1981. pp. 54-55.
2. Collected decrees of the USSR, 1981, No. 13, p.332.
3. "Materialy....." op cit., p. 55.
4. Pravda, 1984, 11 April.
5. Ibid.
6. Ibid.

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